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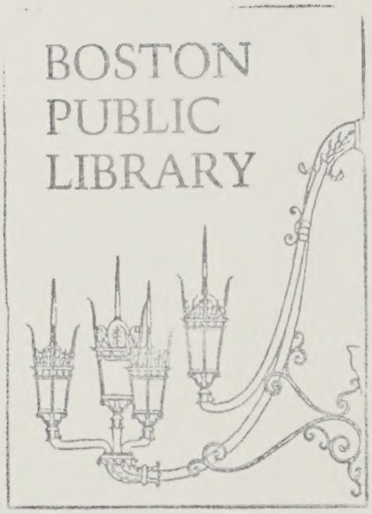

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COMMONWEALTH OF MASSACHUSETTS

PROFESSIONAL SPORTS AND EXHIBITION COMPLEX FEASIBILITY ANALYSIS

INTERIM REPORT

Market Analysis and Preliminary Site
Evaluation of Proposed Stadium and
Exhibition Facilities

November 4, 1992

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November 4, 1992

Mr. Stephen P. Tocco
Secretary of Economic Affairs
One Ashburton Place, Suite 2101
Boston, MA 02108

Dear Secretary Tocco:

We have completed the initial study tasks related to the development of stadium and/or stadium/exhibition facilities within the Commonwealth. The purpose of this interim report is to present the findings of the analyses completed to date; namely the market and comparable facility analysis prepared by Coopers & Lybrand and the preliminary site evaluation prepared by Sverdrup Corporation with the architectural firm of HNTB. These reports are structured to provide you and other representatives of the Commonwealth with the information necessary for making informed decisions related to the study process and the proposed project.

As summarized within this report, there are two primary development concepts which have been the focus of the analyses performed to date; the "megaplex", which contemplates combining exhibition and stadium components into one development, and a stand alone "stadium only" facility. Based on the results of the market analysis and the preliminary site evaluation, it appears that there is sufficient market demand to support the development of a megaplex, but only if located in Boston or an adjacent town. Given the nature of the marketplace for stadium events, the stadium only facility could be located at various sites throughout the Commonwealth.

Based on the results of this analysis, additional guidance is required from the Commonwealth with regard to which facility concept or concepts should be the focus of the remainder of the study. Once this decision has been provided, the selected concept(s) will be subjected to detailed financial, economic and architectural analyses culminating in the preparation of a final report related to the proposed development concept(s).

As this is an interim report, there may be modifications and adjustments to the presentation and study results. However, we do not anticipate that these changes would be significant to the overall project findings.

We sincerely appreciate the assistance and cooperation provided by your office and the Division of Capital Planning and Operations in the completion of this interim report. We look forward to working with you and DCPO representatives throughout the remainder of this analysis.

Very truly yours,

Coopers & Lybrand

COOPERS & LYBRAND

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COMMONWEALTH OF MASSACHUSETTS

PROFESSIONAL SPORTS AND EXHIBITION COMPLEX FEASIBILITY ANALYSIS

INTERIM REPORT

SECTION I:
Executive Summary

November 4, 1992

Executive Summary

We have completed the initial study tasks related to the development of a stadium and/or a stadium/exhibition facility within the Commonwealth. To date, the specific tasks completed include the market analysis, the preliminary site evaluation and the comparable facility review.

The purpose of this interim submission is to present the findings of the analyses completed to date and to provide the information necessary for making an informed decision related to the direction of future analysis of the proposed project. This submission has been presented in two reports: - Market Analysis of Proposed Stadium and Exhibition Facilities, and - Preliminary Site Evaluation.

The following summary presents the key findings of both analyses performed to date. However, as always, both reports should be read in their entirety in order to obtain the background, methodology and assumptions underlying the findings.

Primary Analysis and Findings

In performing the initial study tasks, two primary development concepts were considered: the development of a "megaplex", which contemplates combining exhibition and stadium components into one development, and the development of a stand alone "stadium only" facility. Therefore, the market analysis and the preliminary site evaluation focus on convention/exhibition and stadium events, and the facility characteristics required to accommodate the potential facility demand. The findings of each of these components is summarized below:

Market Analysis - Convention/Exhibition Events

- In analyzing the market potential for convention/exhibition space in the Commonwealth of Massachusetts, several hundred surveys of event organizers from throughout the country were conducted.

- These surveys were designed to measure the market potential unique to the Boston area and other specific regions throughout the State.

- Approximately 35 percent of those surveyed indicated interest in holding an event in Massachusetts.

- Of those responding positively to holding an event in the State, over 50 percent indicated that they would definitely hold their event in Massachusetts.

- Through these surveys, we have developed detailed profiles of event characteristics including exhibition, meeting and ballroom requirements, hotel needs, attendance levels and length of event.

- In terms of facility location within the Commonwealth, the majority of event promoters indicated a strong preference for a Boston location, with greatly diminished preference for outlying areas.

- The lack of significant adjacent or nearby convention hotels and other visitor attractions is the primary reason for lack of exhibition space demand outside the immediate Boston area.

- Based on the results of the market analysis, the Boston area can support significantly higher exhibition space levels as compared to other sites within the Commonwealth.

- The level of exhibition space which may be justified from a market perspective at a Boston/Cambridge site ranges from 400,000 to 500,000 gross square feet.

- Boston currently has three convention/exhibition facilities that could impact future facility development: the John B. Hynes Convention Center; the Bayside Expo Center; and the World Trade Center.

- As the Bayside Expo Center and the World Trade Center house primarily local consumer/public show demand, the John B. Hynes Convention Center is the primary facility in the Boston area accommodating large conventions and trade shows.

- At the present time, none of the existing facilities can accommodate the full potential demand estimated for the Boston area due to size constraints and/or operating focus of the existing facilities. Therefore, additional opportunity exists for attracting and accommodating incremental convention/exhibition demand.

- As a part of the market analysis, historical exhibition space event levels of selected comparable facilities were also reviewed. This comparison indicates that current event levels at the Hynes Convention Center are within the mid-range, with a potential to reach the higher end of the comparable facility event range with new facility development.

- At this point in the analysis, we have not focused on the interrelationships between the Hynes Convention Center, or the impacts of the project on the existing hotel and other visitor amenities. These issues will be addressed in later stages of project analysis.

Market Analysis - Stadium Events

- Stadium event organizers focus on area population levels and the favorability of specific facility rental/promotional agreements when selecting venues.

- Based on the results of the market analysis, the development of a stadium on various sites throughout the State could be successful in generating event levels comparable to other professional sports facilities throughout the country.

- It has been assumed that the stadium would be the home of the National Football League New England Patriots thereby providing for 10 professional football games annually.

- A domed stadium could attract approximately 17 to 22 nonprofessional sporting events annually. These events include concerts, motor sporting events, and college and high school sports.

- An open-air stadium could attract approximately 13 to 16 nonprofessional sporting events annually.

- It is recommended that stadium development plans accommodate 65,000 to 75,000 seats, including 5,000 to 7,000 club seats and up to 120 to 160 private suites.

Preliminary Site Analysis

- The Commonwealth, through the Executive Office of Economic Affairs and the Division of Capital Planning and Operations, published Requests for Site Information in August of 1992.

- A total of 21 sites were submitted and reviewed as part of the preliminary site analysis.

- The purpose of the preliminary site evaluation was to develop a short list of viable sites for which further detailed analyses can be performed.

- The minimum requirements for which each site has been evaluated are as follows:

    - Adequate land size/configuration,
    - No significant wetlands, hazardous waste or other environmental problems,
    - Close access to interstate and mass transit routes, and
    - Compatibility with surrounding developments.

- Any site which did not sufficiently meet each of these requirements has been excluded from further consideration.

- Those sites which have met each of the minimum requirements are as follows:

    - Boston - South Bay area
    - Boston - State Hospital Site
    - Cambridge
    - Foxboro
    - Framingham
    - Lynn
    - Worcester

- All of the sites which have met the minimum requirements will be subject to further analysis as potential stadium sites. However, based on the results of the market analysis and the strong preference by event promoters for a Boston location, only the Boston and Cambridge sites will be included for further review for potential megaplex locations.

- Further site analysis of the stadium and/or megaplex sites will proceed based upon the facility concept(s) selected for further consideration by representatives of the Commonwealth.

Summary

Based on the results of the study tasks completed to date, it appears that two development alternatives represent potential courses of action. One option would be to proceed with the evaluation of a megaplex in Boston which would combine the development of 400,000 to 500,000 square feet of dedicated exhibition and related support space with a 65,000 to 75,000 seat enclosed stadium. This would allow for the use of the stadium floor as additional exhibition space when not being used for other stadium activities. An alternative option would be to pursue the evaluation of a stand alone stadium only development at the various sites noted above. This option would provide the Commonwealth with a new football stadium which included club seating and private suites and could accommodate other special events.

Within the Commonwealth of Massachusetts, sites located in Boston/Cambridge provide the potential market strength to justify significant levels of exhibition space demand. Within this area, a megaplex concept combining convention/exhibition space with a professional sports stadium could be supported from a market perspective. The development of such a megaplex concept in other regions throughout the State would not likely provide for event utilization levels which are sufficient to justify the facility from a market perspective. Focus instead should be placed on the stadium only component as a potential development option on various sites throughout the State.

In order to proceed with the remainder of the study tasks, a decision is required from representatives of the Commonwealth with regard to which facility concept or concepts should be pursued. Once this decision has been provided, the selected concept(s) will be subjected to detailed financial, economic and architectural analyses culminating in the preparation of a final report related to the proposed development concept(s).

COMMONWEALTH OF MASSACHUSETTS

PROFESSIONAL SPORTS AND EXHIBITION COMPLEX FEASIBILITY ANALYSIS

INTERIM REPORT

SECTION II:
Market Analysis of Proposed Stadium and Exhibition Facilities

November 4, 1992

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1. Market Trends & Resources

The public assembly industry is comprised of a diverse set of specific markets, each operating with different motivations, facility requirements and impacts on local areas. The scope of this engagement includes an assessment of the market demand for both exhibition space as well as the event demand for a professional sports stadium facility. When evaluating a host community or facility for an event, associations, meeting planners, and event promoters consider a number of market resources. This section provides an overview of the key market resources available in Massachusetts as well as an analysis of how these resources compare to other competitive and/or comparable communities. This section also provides a general description of the tradeshow and convention market and its growth prospects. This information will help form the basis for our assessment of the future exhibition and fixed seating event market potential in Massachusetts.

The specific sections discussed are as follows:

1.1 Primary Market Segments
1.2 Market Trends and Characteristics
1.3 Comparable/Competitive Facilities
1.4 Historical Boston Area Event Utilization

1.1 Primary Market Segments

An overview and description of the primary market segments focused on as part of this analysis are presented below.

1.11 Exhibition Space Event Segment

The market potential for exhibition space is derived from a variety of demand segments. Each of these market segments has unique characteristics in terms of usage patterns, seasonality, and utilization. In evaluating the potential for the construction of new or expanded convention facilities, there are three types of users that represent the major segments of the market: trade shows, conventions, and public shows. These segments are defined as follows.

Trade Shows: Trade shows are exhibitions for professionals from specific industries or technologies. The purpose of trade shows is to display current products, processes, or services for the given industry. Trade shows are sponsored and produced by trade or technical associations or by professional trade show management organizations. They are frequently, but not invariably, accompanied by conventions, meetings, and seminars. The industry is represented by the National Association of Exposition Managers, whose members produce the large majority of all major trade shows in the United States.

Conventions: These events generally consist of privately held meetings of professional groups and associations for action on matters of common concern. These meetings are attended by association members and/or affiliations wishing to share ideas. A convention can consist of a single meeting or a number of concurrent meetings throughout the event period. National conventions typically have a large number of out-of-state delegates. The convention industry is a major industry in the United States and constitutes a major source of income for destination cities, airline carriers, hotels, and other related industries. The proliferation of trade and professional groups has contributed greatly to the growing convention market.

Conventions and trade shows have become more homogeneous over the past several years. In the past, conventions used very little exhibit space in conjunction with their meetings, while trade shows used very few meeting rooms during the course of the event. Now, however, many association planners have included displays and exhibits of products and processes as part of their conventions, and many trade show producers are using meeting rooms to hold in-depth demonstrations and seminars in conjunction with their events.

Within both of the market segments outlined above, there are a variety of event rotational or geographical patterns. These patterns determine the level in which a particular facility will compete within a market segment. These geographical classifications are as follows:

International:	Exhibitors and attendees are drawn from all geographical regions throughout the world.
National:	Exhibitors and attendees are drawn from all geographical regions within the United States.

Regional:	Exhibits, shows or conventions are held for a specific geographical region within the United States (Northwest, Midwest, Pacific, etc.) and tend to draw attendees from two or more states within that region.
State:	Exhibits, shows or conventions are held in a city where exhibitors and attendees are primarily from within the state.
Local:	Exhibitors, shows or conventions are held in a city where exhibits and attendees are primarily from within the local area.

Public Shows: Public shows are special interest consumer oriented events which are designed to attract the general public and typically charge admission. Depending upon the size, location, and type of merchandise being sold, attendance at public (consumer) shows is usually drawn from the local area. The expenditures made by these attendees, therefore reflect a redistribution of existing dollars. Examples of public shows are boat shows, car shows, and home and garden shows.

In addition to the market segments described above, the following market segments constitute potential users of the facility; however, we have not performed a detailed analysis of these segments in this report due to the specificity of their market, the global nature of the market (i.e., the World's Fair) and their varying and inconsistent levels of utilization and facility requirement characteristics.

Formal Corporate/Meeting Functions: These events consist of gatherings of individuals organized under a corporate or association entity and are generally smaller and more specific in their purpose than a convention.

World Exhibitions: Large international exhibitions which represent many countries and sectors of industry are typically once-only events. Examples include the World's Fair in Knoxville and New Orleans and Expo Montreal.

Merchandise Marts/Trade Marts: Permanent exhibitions held in a building specifically designed to bring together sellers and buyers in selected industry categories. Merchandise marts are usually owned and managed by private companies. Examples include Dallas Market Center and Infomart.

Other Events: In addition to the market segments noted above, a facility's design characteristics may allow other events to be significant users of a convention center. These events include graduations, lectures, religious and other large assemblies, concerts, sporting events, family shows, and other such events.

Other Definitions

Net Square Footage: Net square footage is the actual amount of space required for exhibits at conventions, trade shows, and public shows. Exhibitors and event planners typically express their exhibit space requirements in terms of net square feet.

Gross Square Footage: Gross square footage includes the net amount of space required for exhibits plus circulation space such as aisles and public areas. While a good rule of thumb is that net space totals 50 percent of gross space (i.e., a 50,000 net square foot show requires 100,000 gross square feet of exhibit hall space), it is important to be aware of frequent variations. For example, a 40,000 net square foot show in a 100,000 square foot exhibit hall can, in fact, require use of the total facility.

1.12 Stadium Event Segment

The major function of a stadium is to provide the facilities necessary for professional sporting events, primarily football and baseball. In many cases, however, a stadium can play an important role in servicing a variety of other event markets including concerts, motor sports, amateur sports and other such events. In recent years, several cities have analyzed or approved the construction of joint football stadium/convention center projects. These types of developments allow for the more complete use of the stadium facility as exhibition space for larger trade events.

The domed facilities generally house a greater level of other events relative to the open-air stadiums. This is due primarily to the fact that domed facilities provide a regulated environment and a better configuration for most other events. In addition, other event usage is generally discouraged at natural grass open-air facilities due to the potential for field damage. The specific level of other event activity is generally a function of both local population and spending levels and the number of other facilities within a region competing for events.

1.2 Market Trends and Characteristics

Within this section, we present the trends and characteristics of both the exhibition space and the fixed seating event markets.

1.21 Exhibition Space Market Trends

Convention and trade show events continue to be an effective means of promoting products and services. Data from The Meetings Market '92 published by Meetings & Conventions indicted that over 225,000 major conventions and association meetings were held in 1991. Total attendance at these events exceeded 31 million, with nearly 7 million spouses in attendance. According to Meetings & Conventions, over $26 billion dollars in direct spending was attributable to these major conventions and association meetings.

However, beginning in 1989-1990, growth in the convention and trade show industry slowed largely due to nation-wide recession and the Gulf War. The effects of the recession are expected to continue for a period of time, while the impacts generated by the War were short lived. Most industry projections indicate continued steady growth over the next 5 to 10 years. Although these are national trends, they provide an indication as to how potential convention and trade show business might be affected on a local basis.

According to Meetings & Conventions, of the major conventions held, over 72 percent involve exhibits. Of those convention events which include exhibits, approximately 55 percent required over 10,000 net square feet of exhibit space. Such events represent the primary market for convention and trade show facilities. As noted earlier, net square feet relates only to the actual space occupied by exhibits. Gross square feet relates to the total space required within an exhibit hall including aisles and circulation space.

The availability of suitable hotels, ease of transporting attendees, and transportation costs are rated the most important factors by planners in selecting event destinations. Other factors cited are quality of facilities, delegate appeal and area climate. Without accommodating these destination selection criteria, the ability of a facility to compete for events is severely limited. Exhibit 1.2-1 on the following page outlines the most significant factors in selecting a meeting or convention destination.

As the summary of selection criteria outlined below suggests, event planners have become increasingly demanding as to the availability and quality of facility and amenities provided. As communities compete to capture increasing event market share and the associated economic impacts, the national inventory of quality facilities and amenities has also risen.

Exhibit 1.2-1

Factors Considered Important in the Selection of a Meeting/Convention Destination

	Association Planners	Convention Planners
Availability of hotels & meeting facilities	1	1
Ease of transporting attendees to location	2	2
Transportation costs	4	3
Distance from individual attendees	3	4 (1)
Climate	5	4 (1)
Availability of recreational facilities	7	6
Sightseeing, cultural, & other attractions	6	7
Glamorous or popular image of location	8	8

(1) Tied for 4th

Source: The Meetings Market 1992, conducted by Market Probe International, Inc.

1.22 Fixed Seating Event Market Trends

The primary tenant of a stadium facility is generally a professional sports team or teams. The fixed schedules of professional sports provides constant facility utilization in terms of events. The attendance levels at professional sports events has generally increased slightly over the past several years, with variations within each specific market. These variations are a result of local economic and population conditions as well as the performance of the local sports team.

The trends and characteristics of the non-sporting fixed seating event market are determined primarily by the condition of the local population and income characteristics. Concerts, motor sports, family shows, and other fixed seating promoters will focus on these conditions, as well as the particular facility rental and promotional agreements, when making destination decisions. Within each of the primary seating event types, there are a number of common trends as outlined on the following page.

Concerts - Increasingly, the only concert events held in stadium venues are the multi-headliner productions, with the exceptions of popular productions such as Guns 'n' Roses, U2 and the Grateful Dead. Multi-headliner shows which have recently become standard are primarily held only in stadiums.

Other Events - Other events incorporate a wide variety of attractions including motor sports, religious festivals, trade events, local private and public functions, consumer shows, and other such events which generally draw a high percentage of their attendance from the local area. The levels of such other events has remained fairly constant in most markets throughout the country. Specific or unique local economic/population changes as well as the inventory of competitive venues can impact event levels within a particular venue.

In summary, the primary tenant of a stadium is generally a professional football or baseball team. Facility utilization from these sources has remained largely constant throughout the country. The non-sports fixed seating market consists of a diverse set of events drawing attendance from the local area. This market has continued to provide event utilization for most professional sports stadiums throughout the country.

1.3 Comparable/Competitive Facilities

As part of the review of comparable/competitive facilities, we have focused on both convention and trade show venues, as well as professional sports stadiums. Each of these facility types are reviewed below:

1.31 Convention and Trade Show Venues

A total of 12 facilities were analyzed and included in this review, with the existing Hynes Convention Center, Bayside Expo Center and the World Trade Center presented for comparison purposes. The facilities identified in this report were deemed to present some level of competition or comparability to the Massachusetts area due to factors such as location or size of the metropolitan area. The facilities and cities analyzed include:

- Atlantic City Convention Center, Atlantic City, New Jersey;
- Georgia World Congress Center, Atlanta, Georgia;
- Baltimore Convention Center, Baltimore, Maryland;

- Cobo Conference/Exhibition Center, Detroit, Michigan;
- Indianapolis Convention Center, Indianapolis, Indiana;
- Javits Convention Center, New York, New York;
- Rosemont Exposition Center, Rosemont, Illinois;
- Rhode Island Convention Center, Providence, Rhode Island;
- Columbus Convention Center, Columbus, Ohio;
- Philadelphia Convention Center, Philadelphia, Pennsylvania;
- Lawrence Convention Center, Pittsburgh, Pennsylvania; and
- Washington Convention Center, Washington D.C.

We have identified specific resources that event organizers consider when choosing a particular facility and/or destination, and have evaluated the following resources in each of the aforementioned cities:

- Exhibit space;
- Meeting and ballroom space; and
- Accessibility.

These factors are discussed in greater detail below.

Exhibit Space

One of the primary characteristics which defines a trade show and convention facility and the market in which that facility competes is the amount of available exhibition space. In reviewing exhibition space levels, there is a distinction between prime and total exhibition space relating to the exact purpose of the space. Prime refers only to space dedicated solely to exhibitions, and total refers to all building space which could potentially be used for exhibits.

Exhibit 1.3-1 outlines the facilities surveyed by estimated prime and total exhibit space. The amount of prime exhibit space of the facilities surveyed range from 100,000 square feet at the Rhode Island Convention Center, under construction in Providence, to 760,000 square feet at the Javits Convention Center in New York City. Total exhibit space at these facilities range from 100,000 square feet at the Rhode Island Convention Center under construction in Providence to 900,000 square feet at the Javits Convention Center. The existing Hynes Convention Center contains 193,000 square feet of exhibition space.

EXHIBIT 1.3 – 1
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
COMPARISON OF FACILITY EXHIBIT SPACE

CITY/FACILITY	PRIME GROSS EXHIBIT SPACE	TOTAL GROSS EXHIBIT SPACE
New York\Javits Convention Center	760,000	900,000
Atlanta\Georgia World Congress Center	640,000	840,000
Detroit\Cobo Conference\Exhibition Center	700,000	800,000
Chicago\Rosemont Exposition Center	350,000	600,000
Philadelphia\Convention Center (1)	317,000	440,100
Atlantic City\Convention Center (2)	350,000	436,000
Washington D.C.\Convention Center (3)	250,000	381,000
Columbus\Convention Center	90,000	306,000
Indianapolis\Indianapolis Convention Center	205,000	301,000
Boston\Bayside Expo Center	240,000	250,000
Boston\Hynes Convention Center	193,000	193,000
Baltimore\Convention Center	120,000	145,000
Pittsburgh\Lawerence Convention Center	103,000	131,000
Boston\World Trade Center	120,000	132,000
Providence\Rhode Island Convention Center (1)	100,000	100,000

(1) Under construction.

(2) The new Atlantic City Convention Center will have approximately 486,000 square feet of prime gross exhibition space.

(3) Considering new facility construction.

Source: Facility Management

Meeting And Ballroom Space

The importance of providing sufficient state-of-the-art meeting and ballroom space cannot be underestimated. Event organizers have increasingly placed a premium on such space in selecting trade show and convention centers for their event.

Exhibit 1.3-2 provides a comparison of the number and total gross square footage of meeting and ballrooms in the comparable and/or competitive facilities. Available meeting and ballroom space for the facilities surveyed ranged from approximately 17,000 square feet in 18 meeting rooms at the Rhode Island Convention Center to over 200,000 square feet in 100 meeting rooms at the Georgia World Congress Center in Atlanta.

The number and square footage of ballrooms are also presented in Exhibit 1.3-2 for the competitive/comparable facilities surveyed. All of the twelve facilities surveyed have a ballroom. The square footage of these ballrooms range from 20,000 square feet at both the Rosemont and Rhode Island Convention Centers to 52,000 square feet at the Baltimore Convention Center.

Accessibility

According to many state, regional and national meeting planners, and as illustrated in Exhibit 1.3-3, a city's accessibility for delegates and exhibitors, particularly via commercial airlines, is a key determinant of the ability of a community to host their events.

As a measure of the relative air access, the level of direct flight service from other domestic and foreign cities is a primary consideration. Exhibit 1.3-3 provides a summary of air service into Massachusetts and the comparable and/or competitive cities.

Locational Patterns

Exhibit 1.3-4 provides an historical summary of geographic preferences of major convention organizers. Many different factors are considered when deciding where to hold conventions. As shown on Exhibit 1.3-4, the largest percentage of conventions are held in the South Atlantic. This geographic region has a warm climate, which is a primary characteristic considered by meeting planners. The geographic location of New England has historically not attracted a significant level of convention/ trade show activity. Other important site selection characteristics have historically included cost, entertainment, and the number of members in the region.

EXHIBIT 1.3–2
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
COMPARISON OF FACILITY MEETING AND BALLROOM SPACE

City\Facility	Number of Meeting Rooms	Meeting Room Gross Square Footage	Number of Ballrooms	Ballroom Gross Square Footage	Combined Gross Square Footage
Atlanta\Georgia World Congress Center	70	200,000	1	33,000	233,000
Detroit\Cobo Conference\Exhibition Center	84	168,000	2	46,000	214,000
New York\Javits Convention Center	100	90,000	1	40,000	130,000
Indianapolis\Convention Center	52	75,000	1	54,400 (1)	129,400
Philadelphia\Convention Center	41	88,000	1	31,000	119,000
Baltimore\Convention Center	23	54,006	1	52,296	106,302
Atlantic City\Convention Center	30	78,150	1	23,000	101,150
Washington D.C.\Convention Center	37	70,000	1	26,600	96,600
Boston\Hynes Convention Center	37	68,200	1	25,000	93,200
Columbus\Convention Center	31	45,000	1	39,400 (2)	84,400
Boston\World Trade Center	28	45,000	3	18,000	63,000
Chicago\Rosemont Exposition Center	15	28,000	1	20,000	48,000
Pittsburgh\Lawrence Convention Center	25	42,000	1 (3)	28,000	42,000
Boston\Bayside Expo Center	8	20,000	0	0	20,000
Providence\Rhode Island Convention Center	18	17,000	1	20,000	37,000

N/A = Not Available

(1) An additional 35,000 square foot ballroom is under construction.

(2) An additional 25,000 square foot ballroom is under construction.

(3) The 28,000 square foot exhibition hall may be used for ballroom space.

Source: Facility Management & 1992 AudArena Stadium Guide

EXHIBIT 1.3–3

MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
COMPARISON OF AIR SERVICE

CITY	NUMBER OF DOMESTIC CITIES WITH DIRECT FLIGHTS	NUMBER OF FOREIGN CITIES WITH DIRECT FLIGHTS	TOTAL CITIES
Chicago	134	18	152
New York	122	30	152
Washington	128	10	138
Pittsburgh	119	6	125
Philadelphia	106	13	119
Baltimore	100	9	109
Boston	91	13	104
Indianapolis	73	4	77
Atlantic City	7	0	7

Source: Official Airline Guide, October – November 1992

EXHIBIT 1.3–4
MASSACHUSETTS STADIUM/EXHIBITION ANALYSIS
LOCATION OF LAST MAJOR CONVENTION

Geographic Areas	States Included	Percent of Market
South Atlantic	DE, DC, FL, GA, MD, NC, SC, VA, WV	23%
Pacific	AK, CA, HI, OR, WA	15%
West South Central	AR, LA, OK, TX	12%
East North Central	IL, IN, MI, OH, WI	11%
Middle Atlantic	NJ, NY, PA	8%
Mountain	AZ, CO, ID, MT, NV, NM, UT, WY	7%
Outside United States		7%
New England	CT, ME, MA, NH, RI, VT	6%
East South Central	AL, KY, MS, TN	6%
West North Central	IA, KS, MN, MO, NE, ND, SD	5%

Source: The Meetings Market 1992

1.32 Professional Sports Stadiums

As part of the comparable facilities analysis, all 27 existing professional football stadiums were analyzed and included in this review, with the existing Foxboro Stadium highlighted for comparison purposes. Seven of the stadiums are domed, while the remaining twenty facilities are open-air stadiums.

Within this comparative analysis, we focused on three primary facility characteristics as outlined below.

- General seating capacity;
- Private suites; and
- Club seats.

These factors are discussed in greater detail below.

General Seating Capacity

The capacity of a stadium is one of the primary determinants of the types of events which can be accommodated. The capacity level of a stadium restricts or allows for different types of events. A stadium with a small capacity (under 60,000), has a limited chance of hosting premier events, such as the Super Bowl. However, the larger stadiums have a reduced likelihood of capturing smaller touring concerts, which favor more intimate surroundings.

Exhibit 1.3-5 outlines the capacity and average attendance level for the past four years for each NFL stadium. The capacities range from 92,000 at the Los Angeles Memorial Coliseum in Los Angeles, to 55,000 at the RFK Stadium, in Washington, D.C. The highest attendance level percentage is at Rich Stadium, in Orchard Park, New York while the lowest attendance level percentage is at Sun Devil Stadium, in Tempe, Arizona. The league average capacity is approximately 68,000.

Private Suites

Beginning with the development of Joe Robbie Stadium in Miami, private suites have come to represent a significant source of revenue for the financing of stadiums. Private suites currently exist in all of the stadiums with the exception of the Los Angeles Memorial Coliseum and the existing RFK Stadium, as outlined in Exhibit 1.3-6.

EXHIBIT 1.3–5
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
NFL HISTORICAL REGULAR SEASON PAID ATTENDANCE
1988–1989 THROUGH 1991–1992 SEASONS

			1991–1992			1990–1991			1989–1990			1988–1989	
TEAM	FACILITY	CAPACITY	% OF CAP.	AVG. ATT.	% CHG	% OF CAP.	AVG. ATT.	% CHG	% OF CAP.	AVG. ATT.	% CHG	% OF CAP.	AVG. ATT.
Philadelphia Eagles	Veterans Stadium	63,358	103.33%	65,469	−0%	103.66%	65,678	−0%	103.67%	65,686	1%	103.06%	65,297
San Francisco 49ers	Candlestick Park	64,252	101.70%	65,345	−0%	101.75%	65,377	2%	99.58%	63,982	1%	98.87%	63,523
Houston Oilers	Astrodome	61,000	101.07%	61,650	5%	96.56%	58,903	2%	94.36%	57,557	22%	77.65%	47,369
Pittsburgh Steelers	Three Rivers Stadium	59,000	100.07%	59,044	−0%	100.27%	59,161	0%	99.79%	58,877	−0%	99.87%	58,925
New York Giants	Giant Stadium	76,891	99.00%	76,119	0%	98.87%	76,019	0%	98.78%	75,951	−0%	98.78%	75,956
Chicago Bears	Soldier Field	66,949	98.81%	66,153	0%	98.68%	66,067	0%	98.62%	66,028	−0%	98.66%	66,053
Buffalo Bills	Rich Stadium	80,290	98.36%	78,973	2%	96.76%	77,691	−1%	97.52%	78,300	−1%	98.36%	78,977
Washington Redskins	RFK Memorial Stadium	55,750	98.10%	54,692	−0%	98.17%	54,732	0%	98.12%	54,703	0%	98.12%	54,700
New York Jets	Giant Stadium	76,891	97.91%	75,282	−0%	98.13%	75,456	0%	98.11%	75,440	−1%	98.68%	75,879
Kansas City Chiefs	Arrowhead Stadium	78,067	97.81%	76,356	6%	92.70%	72,370	17%	79.16%	61,797	11%	71.27%	55,641
Denver Broncos	Mile High Stadium	76,273	97.56%	74,410	−1%	98.13%	74,846	−0%	98.16%	74,866	−0%	98.63%	75,229
Seattle Seahawks	Kingdome	64,964	97.53%	63,358	−0%	97.54%	63,363	−0%	97.93%	63,620	0%	97.79%	63,531
Cincinnati Bengals	Riverfront Stadium	59,756	97.31%	58,151	−0%	97.46%	58,238	−0%	97.49%	58,255	0%	97.20%	58,085
New Orleans Saints	Superdome	69,573	97.15%	67,593	2%	94.99%	66,084	−1%	95.87%	66,701	−2%	97.96%	68,151
Minnesota Vikings	Metrodome	63,000	96.97%	61,089	−1%	98.17%	61,850	1%	97.53%	61,445	−0%	98.02%	61,750
Dallas Cowboys	Texas Stadium	63,856	96.54%	61,647	6%	91.27%	58,281	9%	83.89%	53,571	7%	78.50%	50,130
Atlanta Falcons	Fulton County Stadium	59,643	92.14%	54,954	1%	91.11%	54,341	16%	78.72%	46,949	18%	66.56%	39,699
Green Bay Packers	Lambeau Field	57,063	91.60%	52,271	−9%	100.63%	57,424	3%	98.06%	55,958	1%	96.84%	55,258
Cleveland Browns	Cleveland Municipal Stadium	80,049	89.90%	71,964	−1%	91.04%	72,874	−7%	97.63%	78,155	0%	97.46%	78,019
Indianapolis Colts	Hoosier Dome	60,127	86.45%	51,978	−6%	92.46%	55,591	−6%	98.13%	59,004	1%	96.75%	58,171
Los Angeles Rams	Anaheim Stadium	69,008	83.80%	57,827	−9%	92.37%	63,745	2%	90.52%	62,467	7%	84.83%	58,537
Miami Dolphins	Joe Robbie Stadium	75,000	83.27%	62,452	−4%	87.16%	65,368	8%	80.71%	60,536	−8%	87.75%	65,812
San Diego Chargers	Jack Murphy Stadium	60,750	80.78%	49,075	−1%	81.81%	49,702	3%	79.68%	48,405	−1%	80.40%	48,840
Detroit Lions	Pontiac Silverdome	80,500	78.43%	63,139	−6%	83.81%	67,464	29%	64.74%	52,113	24%	52.01%	41,871
Tampa Bay Buccaneers	Tampa Stadium	74,314	67.54%	50,188	−18%	81.94%	60,896	3%	79.44%	59,037	10%	72.10%	53,582
New England Patriots	Foxboro Stadium	60,794	67.49%	41,031	5%	64.50%	39,211	−16%	76.83%	46,709	−15%	90.38%	54,945
Los Angeles Raiders	Los Angeles Coliseum	92,456	65.95%	60,979	6%	62.07%	57,391	14%	54.68%	50,554	−7%	58.81%	54,375
Phoenix Cardinals	Sun Devil Stadium	72,000	61.10%	43,995	−6%	65.09%	46,864	1%	64.64%	46,544	−27%	89.13%	64,173
NFL AVERAGE		68,628	89.78%	61,614	−1%	90.81%	62,321	2%	88.64%	60,829	1%	88.08%	60,446

Source: NFL offices, stadium management, industry periodicals.

EXHIBIT 1.3–6
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
NATIONAL FOOTBALL LEAGUE STADIUMS
RANKED BY TOTAL NUMBER OF PRIVATE SUITES

TEAM	FACILITY	YEAR BUILT	NUMBER OF SUITES	PRICE PER YEAR PER SUITE	TICKETS INCLUDED	% LEASED
Dallas Cowboys	Texas Stadium	1971	295 (1)	$25,000 – $100,000	NFL	95%
Miami Dolphins	Joe Robbie Stadium	1987	215	$ 29,000 – $65,000	NONE	65%
Atlanta Falcons	Georgia Dome	1992	183	$20,000 – $120,000	NFL	100% (2)
Los Angeles Raiders	Memorial Coliseum	1923	150 (3)	N/A	N/A	N/A
Philadelphia Eagles	Veterans Stadium	1971	141 (4)	$50,000 – $175,000	NFL & MLB & TEMPLE U.	90%
New Orleans Saints	Louisiana Superdome	1975	132	$18,000 – $40,000	NONE	100%
Houston Oilers	Astrodome	1965	120	$20,000 – $45,000	NFL	95%
Chicago Bears	Soldier Field	1924	116	$60,000 – $75,000	NFL	100%
Minnesota Vikings	Metrodome	1982	115	$51,000 – $61,000	NFL	70%
Los Angeles Rams	Anaheim Stadium	1966	108	$36,000	NFL & MLB	95%
Green Bay Packers	Lambeau Field	1957	108	$10,000 – $15,000	NONE	100%
Cleveland Browns	Municipal Stadium	1931	108	$43,000 – $59,000	NFL & MLB	100%
Pittsburgh Steelers	Three Rivers Stadium	1970	104	$40,000 – $45,000	NFL & MLB	100%
Detroit Lions	Pontiac Silverdome	1975	102	$20,000 – $35,000	NONE	60%
Indianapolis Colts	Hoosier Dome	1983	99	$15,000 – $36,000	NONE	100%
San Francisco 49'ers	Candlestick Park	1960	94	$24,000 – $78,000	NFL	95%
Kansas City Chiefs	Arrowhead Stadium	1972	80	$15,000 – $45,000	NONE	100%
San Diego Chargers	Jack Murphy Stadium	1967	79	$25,000 – $50,000	NFL	N/A
New York Giants/Jets	Giants Stadium	1976	72	$112,000	ALL NFL	100%
Denver Broncos	Mile High Stadium	1948	60	$50,000 – $88,000	NFL	70%
Phoenix Cardinals	Sun Devil Stadium	1958	60	$46,500	NFL	88%
Tampa Bay Buccaneers	Tampa Stadium	1967	57	$43,000 – $90,000	NFL	N/A
Seattle Seahawks	Seattle Kingdome	1976	55	$50,000 – $80,000	NFL & MLB	80%
Buffalo Bills	Rich Stadium	1973	50	$12,500 – $32,000	NONE	N/A
New England Patriots	Foxboro Stadium	1971	42	$33,000 – $125,000	NFL	N/A
Cincinnati Bengals	Riverfront Stadium	1970	20	$25,000	NONE	100%
Washington Redskins	RFK Stadium	1961	0	NAP	NAP	NAP

N/A = Not Available

NAP = Not applicable

(1) 225 private suites were sold outright, 70 are available for lease.

(2) Facility management represents that signed commitments and deposits have been obtained for 100% of these suites. The deposit is composed of the first and last years rent payment.

(3) Plans currently exist to install 150 private suites in the L.A. Memorial Coliseum. This represents a reduction from the original plan of 200 suites.

(4) 89 of the suites are controlled by the Eagles and 52 are controlled by the Phillies.

Source: NFL Offices, Stadium Management and Industry Periodicals.

The price of these suites range significantly at the various stadiums. Veterans Stadium in Philadelphia, receives a high end annual suite premium of $175,000, while suites at Lambeau Field lease for as low as $10,000 annually. The price of the suites can include tickets in any combination of the National Football League, Major League Baseball, College, any other events, or may not include tickets at all.

Club Seats

Club seats are relatively new to professional sports arenas and stadiums. Like private suites, club seats have also come to represent a substantial source of stadium financing revenue. These seats are typically found in the best locations in the stadium and generally offer extra amenities such as exclusive lounge areas, cocktail waiter/waitress service, and more comfortable seats.

As outlined in Exhibit 1.3-7, the number of club seats range from a high of nearly 9,300 at Joe Robbie Stadium in Miami to 1,600 club seats at Mile High Stadium, in Denver. The annual prices for club seats also have different ranges at the various venues, with a high of $2,000 at Sun Devil Stadium in Tempe, Arizona, down to $350 at both Rich Stadium and the Astrodome.

1.4 Historical Boston Area Event Utilization

Currently, the major national and regional convention and trade show activity conducted within the State takes place in the Boston area. The remainder of this section presents a historical summary of the types and quantity of events held at the Hynes Convention Center, the World Trade Center and the Bayside Expo Center.

As outlined in Exhibit 1.4-1, the primary event categories generating exhibition space usage include conventions and trade shows, public shows and large meeting functions. In analyzing Exhibit 1.4-1, there is a clear distinction in the types of events being attracted to the various Boston area venues. The Hynes has historically accommodated conventions and trade events, placing little emphasis on the public show sector. In focusing on this market, the Hynes serves as the primary generator of convention and trade event economic impact. Conversely, the Bayside generates a significant segment of its business from public shows which account for comparatively very little in terms of community-wide economic impact, but can provide a high level of operating revenue.

EXHIBIT 1.3–7
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
NATIONAL FOOTBALL LEAGUE STADIUMS
RANKED BY TOTAL NUMBER OF CLUB SEATS

TEAM	FACILITY	YEAR BUILT	NUMBER OF CLUB SEATS	ESTIMATED PRICE PER YEAR	TICKETS INCLUDED	% LEASED
Miami Dolphins	Joe Robbie Stadium	1987	9,279	$800 – $1,400	NFL	N/A
Houston Oilers	Astrodome	1965	8,000	$350	NFL	90%
Buffalo Bills	Rich Stadium	1973	6,841	$350	NFL	N/A
Atlanta Falcons	Georgia Dome	1992	6,300	$1,000 – $1,800	NFL	76% (1)
Phoenix Cardinals	Sun Devil Stadium	1958	5,000	$600 – $2,000	NFL	70%
Los Angeles Raiders	L.A. Memorial Coliseum	1923	4,000 (2)	N/A	N/A	N/A
Kansas City Chiefs	Arrowhead Stadium	1972	2,000	$435	NFL	100%
Green Bay Packers	Lambeau Field	1957	1,920	$480 (3)	NFL	100%
Denver Broncos	Mile High Stadium	1948	1,606	$1,450	NFL	100%

N/A = Not Available

(1) Facility management represents that signed commitments and deposits have been obtained for 76% of the club seats. The deposit is composed of the first and last years rent payment.

(2) Plans currently exist to install 4,000 club seats into the L.A. Memorial Coliseum. This represents a substantial reduction from the 15,000 club seats orginally planned.

(3) The Packers play 6 home games at Lambeau Field.

Source: NFL Team Offices, Stadium Management, and Industry Periodicals.

EXHIBIT 1.4–1
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
EXISTING BOSTON EXPOSITION FACILITIES
1992 EVENT LIST SUMMARY

Events	Hynes Convention Center	Bayside Expo Center	World Trade Center	Average
Conventions & Tradeshows:				
International	5	2	1	3
National Conventions	24	1	3	9
Regional	8	1	4	4
State	0	0	0	0
Sub Total	37	4	8	16
Public Shows	5	20	5	10
Large Meetings	11	0	1	4
Total	53	24	14	30

Note: Does not include the high number of smaller capacity banquets and other such functions.

Source: Coopers & Lybrand and Facility Management

A detailed breakdown of the convention and trade events accommodated by area venues for the years 1990 through 1992 is presented below:

Exhibit 1.4-2

Massachusetts Sports / Exhibition Complex Analysis
Existing Boston Exposition Facilities
Three Year Event List Analysis

Year	Hynes Convention Center	Bayside Expo Center	World Trade Center
1990	38	3	3
1991	32	4	3
1992	37	3	7
3 Year Total	107	10	13
Percentage of Market	82%	8%	10%

Again, this exhibit highlights the significant focus of the Hynes on convention and trade events geared towards attracting visitors from outside the area.

For comparison purposes, the information presented in Exhibit 1.4-3 compares the convention/trade events and public show event levels among selected comparable facilities. As outlined in the Exhibit, the Hynes is currently attracting convention/trade events within the range of comparable venues, while not attracting significant numbers of public shows. It is important to note that this comparative analysis does not consider the size or scope of exhibition events, rather simply the number of events. While some facilities may report significantly higher numbers of events, this does not necessarily suggest a more highly utilized facility nor a facility which generates higher economic impacts, since many events may have comparatively low attendance or draw a higher percentage of their attendance from the local population. Conversely, some facilities with less events may generate higher utilization and economic benefits by concentrating on large, high-impact events.

EXHIBIT 1.4–3
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
COMPETITIVE AND COMPARABLE FACILITY EVENT ANALYSIS
1992 EVENT LIST SUMMARY

Facility	Prime Gross Exhibit Space	Conventions & Trade Shows Requiring Exhibit Space	Public Shows Requiring Exhibit Space
Indianapolis\Convention Center	205,000	57	34
Chicago\Rosemont Exposition Center	350,000	54	36
Kansas City Convention Center	186,000	51	16
Baltimore Convention Center	120,000	51	36
Atlanta\Georgia World Congress Center	640,000	43	20
Boston\Hynes Convention Center (1)	193,000	37	5
Detroit\Cobo Conference\Exhibition Center	700,000	33	20
Washington D.C. Convention Center	250,000	25	12
Milwaukee\MECCA	132,000	25	41
Atlantic City Convention Center	350,000	24	22

(1) 11 other meetings requiring exhibit space were held at the Hynes Convention Center.

Note: The estimates for the competitive and comparable facilities are for a recent, "typical" year of operations and were compiled from facility event calendars and discussions with facility management.

2. Quantified Market Demand

The purpose of this section is to provide an independent analysis of the magnitude of the potential event markets for the proposed sports/exhibition complex in Massachusetts, and to provide a detailed, quantified summary of the events which represent potential markets for proposed facility development. The scope of the potential markets includes all primary exhibition space events and fixed seating events. Each of these segments is analyzed in detail throughout this section. The eventual facility recommendations will be based on this market analysis, and could range from a stadium facility only, to a larger megaplex consisting of convention/exhibition and sports facilities.

Various development sites for the potential complex have been submitted for analysis as part of this project. In performing the quantified market demand analysis, we have also focused on the impact to the potential event markets and eventual facility recommendations from changes to the specific site of the project. A detailed evaluation of potential sites is presented under separate cover as the second component to this submission.

2.1 Exhibition Space Events

In order to analyze the national and regional event market demand, we have conducted a sample market survey of potential users based on data contained in the following sources:

- Successful Meetings DataBank - Directory of Conventions;
- Trade Show Week Data Book;
- Encyclopedia of Associations; and
- State and Regional Associations (SRA) Directory.

We have utilized these and other data base sources in numerous convention, trade show, and conference facility studies throughout the country. This experience provides us with the professional background necessary to both conduct and interpret the market survey.

The survey was conducted to determine the likelihood that event organizers from this market segment would conduct events in Massachusetts, their specific locational preferences, and the types of facilities they would require to produce the event. The

approximate population of events which require between 10,000 and 1,000,000 net square feet of exhibition space and have an attendance of 500 or more, and the sample size (the number of event organizers in the population which were contacted) are outlined below:

National/Regional Event Survey

Population	3,159
Sample size	315

Through this survey process, we are able to develop an extensive level of detail specific to event markets in the Boston area and throughout the State.

The primary event characteristic in terms of facility requirements is the amount of exhibition space used by the facility. In later sections of this report, we will assess the appropriate size and configuration of exhibition space for the proposed facility, focusing closely on this characteristic. In preparing and presenting this market analysis, the potential event market population has been broken down into four groups based on exhibition space square footage within the following ranges:

- 0 to 10,000 net square feet of exhibit space,
- 10,001 to 50,000 net square feet of exhibit space,
- 50,001 to 100,000 net square feet of exhibit space, and
- Over 100,000 net square feet of exhibit space.

As noted earlier in this report, net square feet refers only to exhibition booth space. Therefore, a 100,000 square foot show would likely require approximately 200,000 square feet of total or gross square feet of exhibition space.

In performing the survey, events identified through sampling were evaluated in terms of characteristics unique to their event. Complete information was assembled regarding event characteristics such as exhibition, meeting and banquet space requirements, hotel demands, various other event related organizer preferences, and the probability of these events rotating to a site located in Massachusetts. Based on the response of each of the event representatives contacted, some events were eliminated from the potential user group due to various rotational policies, destination preferences, number of delegates in the area, and other related issues. These negative responses have been categorized and presented later in this section. Of those event organizers responding positively to a site in Massachusetts as an event destination, complete information was

assembled regarding event characteristics, organizer preferences, and their site preference for the proposed facility. The sample survey findings regarding rotational policy and the level of positive response were extrapolated and applied to the total population. A breakdown of the population of potential events and the survey extrapolation is presented as Table 2.1-1.

Within this exhibit we have presented the event population by segment, the sample sizes, and the positive response percentage. The positive response percentage reflects the percentage of those events sampled which would definitely, likely or possibly consider holding an event at a site in Massachusetts. A breakdown of the strength of the positive response (definitely, likely or possibly) is also included as Exhibit 2.1-1. As outlined in the Exhibit, positive response percentages registered for a potential facility in Massachusetts ranges from 21 percent for events which require less than 10,000 net square feet of exhibition space, up to 56 percent for those events requiring between 50,000 and 100,000 net square feet. It should be noted that these positive response percentages are not particularly high compared to other similar markets. However, among those registering a positive response (definitely, likely, or possibly), the percentage noting that they would definitely hold an event within the State (from 44 to 61 percent) is very high. All of these market characteristics have been incorporated into our analysis of potential event levels and resulting building recommendations.

The specific event characteristics of those national and regional event organizers responding positively to Massachusetts are broken down by market orientation and exhibition space requirements and presented in Exhibit 2.1-2. Specifically, the user profile regarding average space needs, attendance, hotel requirements, usage days, and average rotational cycle, provides the basis from which estimated facility utilization can be calculated.

In order to develop estimates of the annual event utilization for a convention and trade show facility at various locations in Massachusetts, a number of market calculations must be made as outlined in Exhibit 2.1-3. Specifically, the number of potential events as estimated from the survey results (first row in Exhibit) is divided by the average rotational cycle (second row.) The resulting event total (third row) represents the events which would consider facilities in the Massachusetts region in a given year. This total must then be adjusted to reflect the competition for events in the region and the strength of the positive responses registered by the event organizers. This adjustment reflects the "market capture percentage" (fourth row.) The resulting event total (fifth row) represents the number of events which would likely utilize facilities in Massachusetts on an annual basis during mature operations. The event totals can then be multiplied by the number of facility utilization days (sixth row) to estimate the total number of days in which the facility could be utilized by national/regional convention and trade shows (seventh through tenth row.)

Exhibit 2.1–1

Massachusetts Convention/Exhibition Facility
Calculation of Potential State–Wide Event Population
National/Regional Events Only

	Events Which Have The Following Exhibition Space Requirements:				
	Less than 10,000 NSF	10,000 to 50,000 NSF	50,001 to 100,000 NSF	Over 100,000 NSF	Total
Event Population by Segment	1,204	1,366	357	232	3,159
Sample Size	135	103	34	43	315
Positive Response Percentage	21%	41%	56%	35%	
Potential State–Wide Event Market	254	562	199	81	1,096

Positive Response Breakdown:

Definately	48%	61%	50%	44%
Likely	43%	29%	29%	22%
Possibly	10%	21%	21%	33%

Source: Coopers & Lybrand

Exhibit 2.1–2

Massachusetts Convention/Exhibition Facility
Potential Event Characteristics
National/Regional Events Only

	Events Which Have The Following Exhibition Space Requirements:			
	Less than 10,000 NSF	10,000 to 50,000 NSF	50,001 to 100,000 NSF	Over 100,000 NSF
Average Square Feet of Exhibition Space:				
Net	3,900	28,200	73,700	215,900
Gross	8,100	59,100	154,800	453,500
Average Event Attendees:				
Delegates	2,000	3,500	5,600	11,400
Exhibitors	116	600	1,600	4,100
Average Number of Usage Days:				
Move–in	1.6	1.9	3.2	3.3
Event	4.2	3.6	4.2	3.4
Move–out	1.0	1.2	1.8	2.4
Total Utilization Days	6.9	6.7	9.2	9.1
Average Meeting Space Square Footage	15,900	19,500	32,100	24,800
Average Meeting Room Requirements:				
1–50	9	5	7	5
51–100	3	6	7	4
101–500	4	5	8	6
501–1,000	1	1	2	2
Average Number of Times Auditorium Used	1.8	1.7	3.1	1.7
Average Attendance at Auditorium Event	3,300	3,100	2,500	800
Average Number of Times Ballroom Used	3.4	3.1	2.8	2.8
Average Attendance at Ballroom Event	2,000	1,900	2,000	2,800
Average Ballroom Square Footage Required	10,400	22,900	23,800	50,900
Average Peak Hotel Room Block	700	1,300	3,200	4,000
Average Room Block Nights	5	6	6	6
Average Hotels in Room Block	3	4	10	14
Percentage Requiring Adjacent Hotel	45%	58%	36%	33%
Percentage Using Shuttle Service	76%	77%	71%	78%

Source: Coopers & Lybrand, August/September 1992

Exhibit 2.1–3

Massachusetts Convention/Exhibition Facility
Annual Usage Day Calculations
National/Regional Events Only

	Events Which Have The Following Exhibition Space Requirements:				
	Less than 10,000 NSF	10,000 to 50,000 NSF	50,001 to 100,000 NSF	Over 100,000 NSF	Total
Potential State–Wide Event Market	254	562	199	81	1,096
Average Rotational Cycle	8.0	5.0	6.0	4.0	
Annual Potential Event Market	32	112	33	20	198
Market Capture Percentages:	18%	26%	35%	34%	
Estimated Annual Events:	6	29	12	7	53
Average Total Length of Event (Days)	6.9	6.7	9.2	9.1	
Total Annual Usage Days – 1992	39	195	106	62	402
Total Annual Usage Days – 1995	44	203	121	70	438
Total Annual Usage Days – 2000	49	226	135	78	488
Total Annual Usage Days – 2005	54	249	149	86	539

The methodology used in performing the calculations outlined above is summarized as follows:

(1) Potential State–Wide Event Market is divided by the Average Rotational Cycle as estimated from the market survey.
(2) The resulting Annual Potential Event Market is multiplied by the Market Capture Percentage as calculated based on the survey results and the inventory of competitive facilities.
(3) The resulting Estimated Annual Events represent the total potential event levels which could be attracted to various markets within the State.
(4) The Estimated Annual Events are multiplied by the Average Total Length of Event, in order to calculate Total Average Utilization Days.

Source: Coopers & Lybrand

These utilization day estimates, combined with the exhibition space square footage data is used to develop the appropriate size estimates for the facility.

In additional to national/regional convention and trade show events, we reviewed the potential facility utilization generated from State event and public or consumer shows. Based on our analysis, State events do not generally require the level of space provided for at a major convention/trade show facility. State trade show business currently represents a very small percentage of utilization at the Hynes Convention Center. Similarly, public shows in the area currently use space at the World Trade Center and the Bayside Expo Center. Based on this review, it appears that very limited utilization could be generated for a new facility from either of these market segments. The remainder of this analysis therefore focuses on the national and regional event segments.

As part of the survey analysis, the specific site preferences of event organizers was also analyzed. Each organizer surveyed was asked to rank specific regions of the State on a scale of 1 to 5 with 5 being the most preferred. The specific regions include:

- Boston/Cambridge
- Within 15 miles of Boston:
  Lynn/Peabody/Waltham/Quincy
- Central Portion of State:
  Worcester/Marlborough/Framingham/Uxbridge/Oxford/Holland
- Southern Portion of State:
  (Foxboro/West Bridgewater/Bridgewater/Middleboro/Reynham)

As outlined in Exhibit 2.1-4, Boston/Cambridge received a significantly higher response as compared to the other sites. Using these response levels, we can calculate the potential reductions in event potential resulting from convention/exhibition space locations outside Boston/Cambridge. The analysis indicates possible reductions to 57 percent of full market potential for sites within 15 miles of Boston, down to 42 percent of full potential for sites in the Southern portion of the State.

These percentages are used in analyzing the viability exhibition space development on each of the potential sites. This exhibition space viability analysis focuses on a calculation of utilization or beneficial occupancy percentages. Beneficial occupancy is designed to measure potential exhibition space utilization annually as a percentage of total available space:

Exhibit 2.1–4

Massachusetts Convention/Exhibition Facility
Impact of Site on Annual Usage Day Estimates
National/Regional Events Only

	Events Which Have The Following Exhibition Space Requirements:				
	Less than 10,000 NSF	10,000 to 50,000 NSF	50,001 to 100,000 NSF	Over 100,000 NSF	Total
Site Preference Ranking / Scale of 1 to 5 With 5 Being the Highest Ranking:					
Boston	4.3	4.2	4.6	4.8	4.5
Within 15 miles of Boston	3.2	2.6	1.8	2.8	2.5
Central portion of state	2.8	2.0	1.6	2.1	2.0
Southern portion of state	2.6	1.9	1.6	1.7	1.9
Resulting Percentage of Full Event Market Attracted to Each Site Region:					
Boston	100%	100%	100%	100%	100%
Within 15 miles of Boston	74%	62%	39%	58%	57%
Central portion of state	64%	49%	34%	44%	46%
Southern portion of state	60%	45%	34%	35%	42%

Source: Coopers & Lybrand

$$\frac{\text{Total Utilized Space}}{\text{Total Available Space}}$$

Total utilized space estimates are generated by the market analysis, while the available space is determined by the actual exhibition space in the facility multiplied by the 320 days the facility is assumed to be available for use per year. The 320 day figure accounts for holidays, maintenance and other factors which make it difficult or impossible to rent space to potential users.

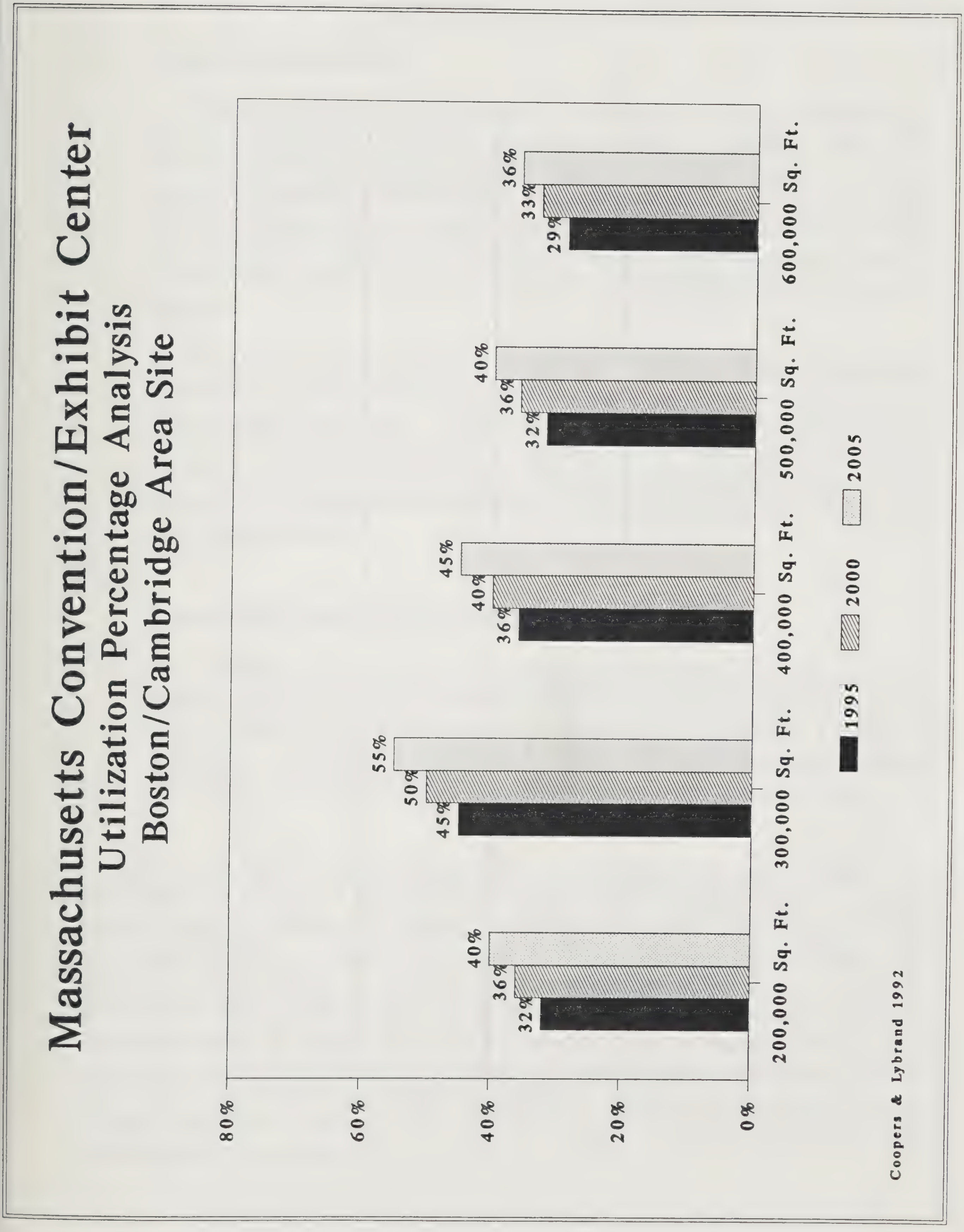
For purposes of this analysis, we have calculated the total utilized space for each of the four site regions for the years 1995, 2000 and 2005. These square foot utilization totals are then used to calculate the beneficial occupancy percentages for exhibition hall sizes ranging from 100,000 to 600,000 square feet. Exhibits 2.1-5 through 2.1-8 present the resulting percentages. In preparing and interpreting analyses of this type, we generally focus on a minimum target utilization percentage of approximately 50 percent as a level required to justify a particular building size. This target percentage incorporates utilization generated from state and national/regional events, as well as public shows. However, as noted earlier in this analysis, state events and local public shows do not represent a consistent, measurable source of event utilization for new facility development. As a result, a target utilization percentage range of 40 to 45 percent, incorporating only national/regional events, has been used in preparing this analysis. This lower range can be justified given the fact that it is the national/regional events which generate the significant majority of economic impact, representing the primary motivation behind the development of convention facilities.

At utilization percentages lower than this, it would be difficult to justify facility construction from a market demand perspective. At percentages significantly higher than the 40 to 45 percent range, potential events may be lost due to exhibition space size constraints. The analysis results for each of the specific geographic regions is summarized below:

Boston/Cambridge

As outlined in Exhibit 2.1-5, utilization percentages range from 32 to 40 percent over the 10 year analysis period for a 200,000 square foot exhibition hall. These percentages peak at a high of 55 percent for a 300,000 square foot facility, indicating a need for even greater space. The 400,000 square foot facility option peaks at 45 percent in 2005, with the 500,000 square foot facility reaching 40 percent. Providing 600,000 square feet of exhibition space would reduce the occupancy percentage to a high of 36 percent, below the desired range. Based on this beneficial occupancy percentage analysis, it appears that an exhibition hall of 400,000 to 500,000 square feet could be justified from a market perspective in Boston/Cambridge.

EXHIBIT 2.1-5



Massachusetts Convention/Exhibit Center
Utilization Percentage Analysis
Boston/Cambridge Area Site

Coopers & Lybrand 1992

Within 15 Miles of Boston

As outlined in Exhibit 2.1-6, utilization percentages have been calculated for facilities ranging from 100,000 to 400,000 square feet of exhibition space. The highest percentage calculated corresponds to the 300,000 square foot option, reaching 32 percent by the year 2005. Even at this highest percentage, the target of 40 to 45 percent is not reached. These results indicate that while there may be a market for some amount of exhibition space within this region, it is not to the level that would be justified as part of a convention/exhibition and stadium megaplex.

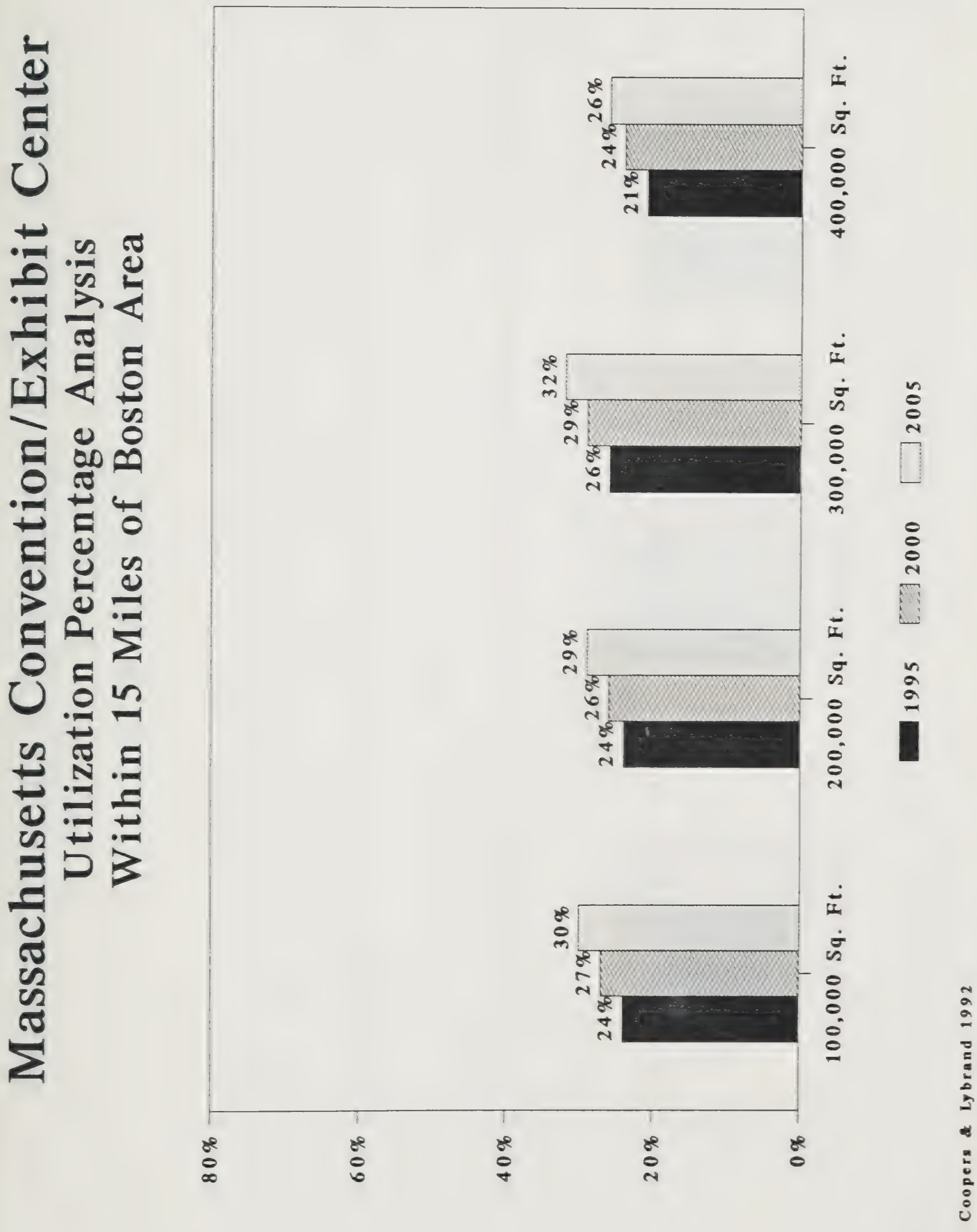
Event organizers within every industry throughout the country place a significant importance on the availability of adequate nearby convention hotels and other visitor industry attractions. The importance of these factors was highlighted in Exhibit 1.2-2 presented in Section 1 of this report. The lack of demand for extensive levels of exhibition space in areas outside Boston/Cambridge is likely a result of the actual and/or perceived lack of such adjacent and nearby hotel and other attractions.

Central and Southern Portion of the State

The utilization percentage results for the central and southern portions of the state are similar to regions surrounding Boston. Some level of exhibition space may be justified, however not to the level that would accommodate a megaplex development. As outlined in Exhibits 2.1-7 and 2.1-8, utilization percentages do not exceed 29 percent for any of the exhibition space development options.

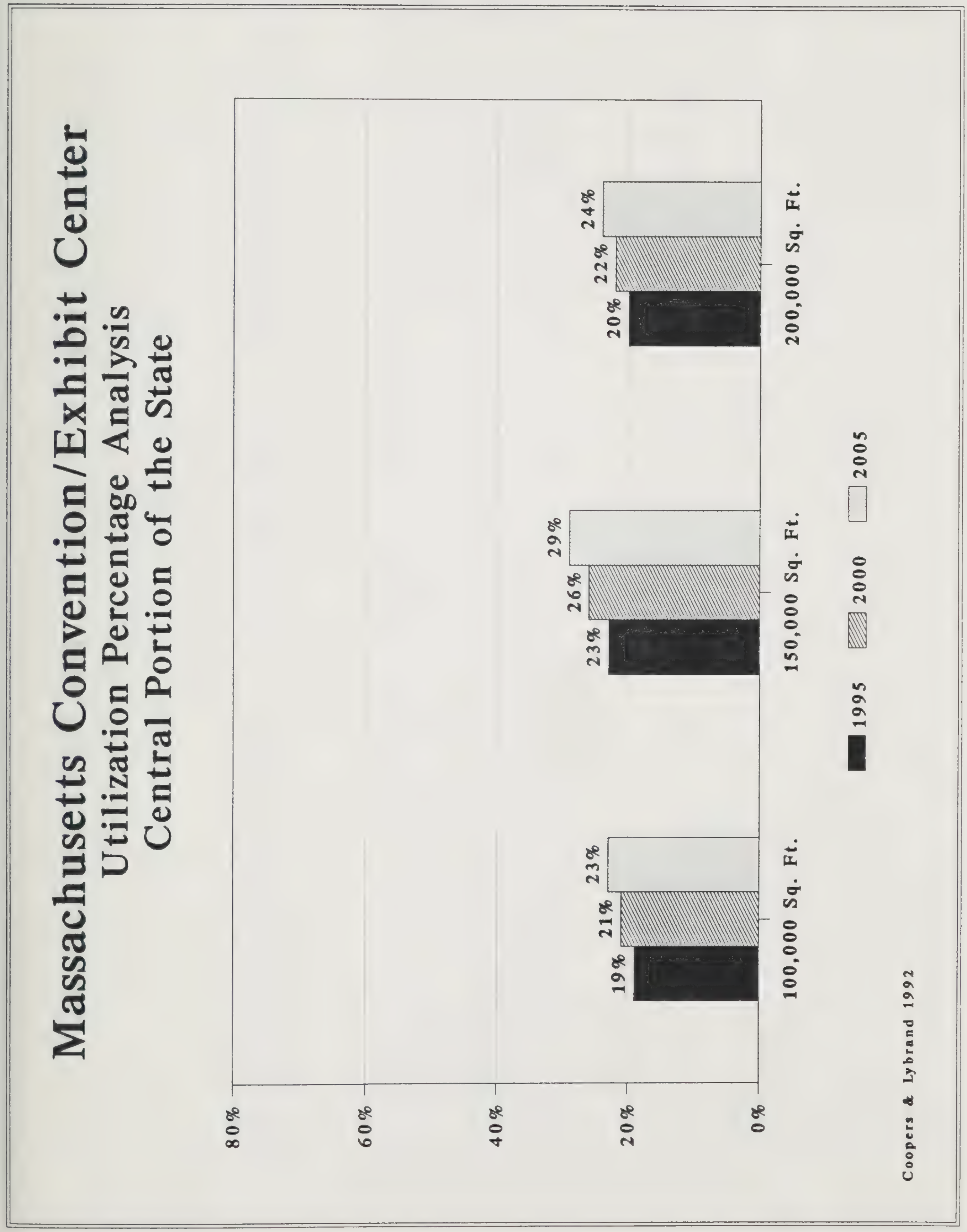
As part of the facility sizing, meeting and ballroom space was also analyzed. In conducting the surveys of potential event organizers, information on the required square footage of meeting and ballroom space was collected. This information has been analyzed and is presented in Exhibit 2.1-9. As outlined in the Exhibit, the maximum square footage of meeting space required by an event type is 85,700. However, the ability of the facility to accommodate concurrent events will be critical. Also presented in the Exhibit is the level of meeting space to accommodate 2 and 3 concurrent events of varying sizes. Based on this analysis, between 80,000 and 120,000 square feet of meeting space would be needed to accommodate potential market demand. The final exhibition hall size will impact the level of meeting space appropriate for the facility.

EXHIBIT 2.1-6



Coopers & Lybrand 1992

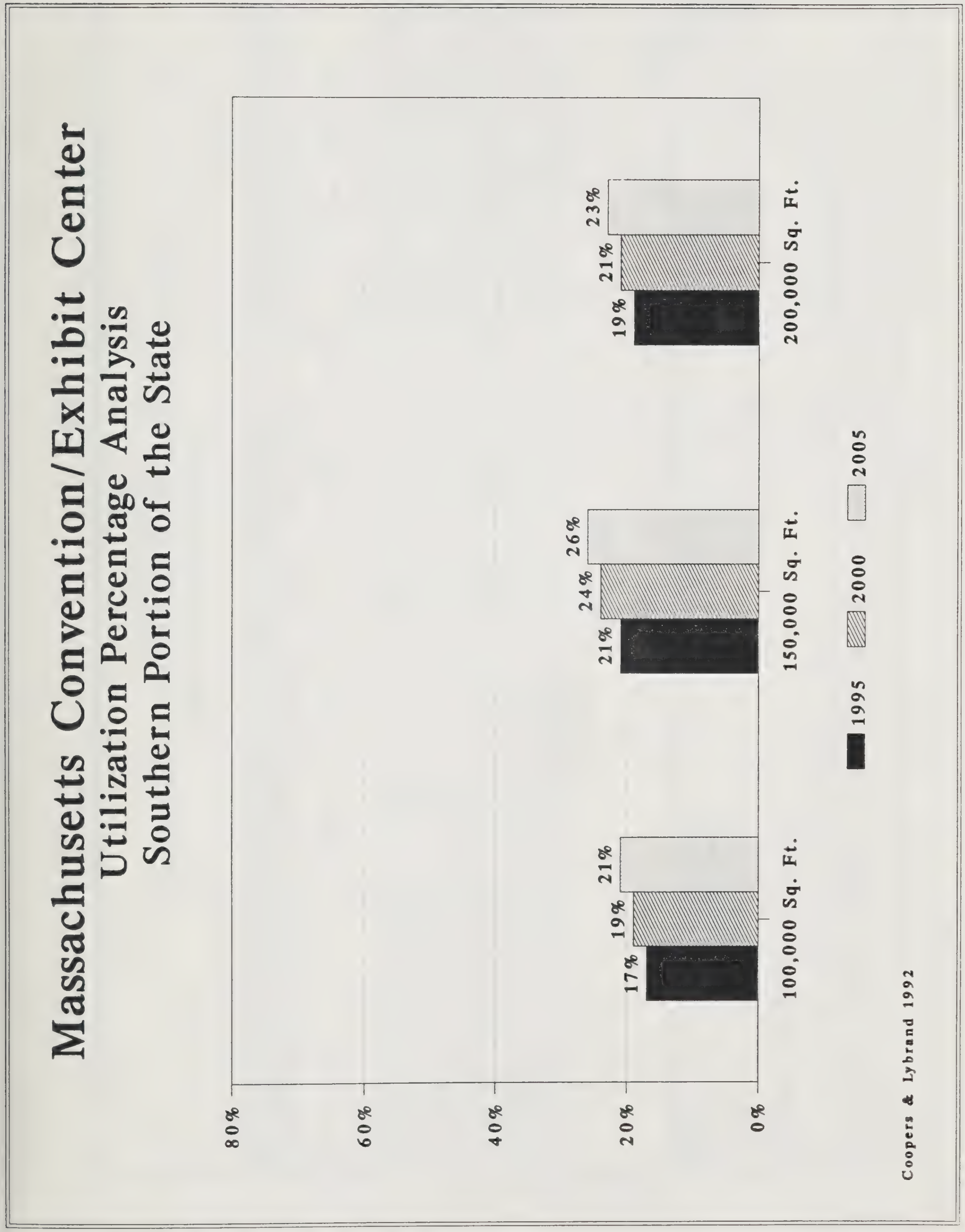
EXHIBIT 2.1-7



Massachusetts Convention/Exhibit Center
Utilization Percentage Analysis
Central Portion of the State

Coopers & Lybrand 1992

EXHIBIT 2.1-8



Massachusetts Convention/Exhibit Center

Utilization Percentage Analysis

Southern Portion of the State

Coopers & Lybrand 1992

EXHIBIT 2.1–9
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
MEETING ROOM ANALYSIS

Square Footage of Meeting Rooms	Utilization %	Square Footage of Meeting Rooms	Utilization %	Square Footage of Meeting Rooms	Utilization %	Square Footage of Meeting Rooms	Utilization %
100,000 NSF +		**50,000 NSF – 100,000 NSF**		**10,000 NSF – 50,000 NSF**		**Less than 10,000 NSF**	
52,500	100%	85,700	100%	72,400	100%	47,200	100%
42,000	95%	57,200	95%	50,400	95%	35,100	95%
34,300	90%	51,900	90%	33,600	90%	24,300	90%
34,300	85%	51,900	85%	28,500	85%	23,600	85%
33,600	80%	44,600	80%	28,300	80%	23,100	80%
33,600	75%	38,300	75%	28,200	75%	19,900	75%
25,700	70%	38,200	70%	23,600	70%	19,300	70%

90% Analysis

Concurrent Events	Required Sq. Ft.	Concurrent Events	Required Sq. Ft.	Concurrent Events	Required Sq. Ft.	Concurrent Events	Required Sq. Ft.
1 event	34,300	1 event	51,900	1 event	33,600	1 event	24,300
2 events	68,600	2 events	103,800	2 events	67,200	2 events	48,600
3 events	111,900	3 events	(1)	3 events	100,800	3 events	72,900

(1) Beyond a practical square footage total.

Note: These results indicate that approximately 80,000 to 120,000 square feet would be necessary to accommodate large, as well as concurrent events. This space should be divisible into approximately 50 to 70 separate break out rooms.

The level of ballroom space required for this project has also been analyzed as presented in Exhibit 2.1-10. As outlined in the Exhibit, the largest ballroom square footage required for an event category totals nearly 100,000 square feet. However, dedicated ballroom space of this size represents an unrealistic configuration of space. In developing estimates of required ballroom space, facility design should accommodate up to 90 percent of the potential event market. Based on this criteria, a total of 40,000 to 45,000 square feet of ballroom space would be appropriate. This level of space would accommodate most event types. In order to accommodate the largest event types, as well as concurrent events, additional ballroom space may occasionally be required. In such cases, the flexibility to convert portions of the exhibition hall into ballroom space would be critical.

As noted earlier in this section, the site preferences and facility requirements have been assembled only from those event organizers indicating some level of positive response to holding an event within the State. There are a variety of reasons that event organizers would not consider a site in the State for producing an event. These reasons have been categorized and are presented below:

Reasons For Not Considering Massachusetts

Regional show, outside of New England	17%
Lack of area members	15%
Prefer warmer weather	12%
Lack of event history	8%
Distance	8%
Require geographically central location	8%
Cost	7%
Lack of industry customers	7%
Other industry shows operating in region	3%
Union/right-to-work state	3%
Prefer Las Vegas	2%
Not familiar with area	1%
Not enough airlines into Massachusetts	1%
Not enough entertainment area	1%
Other (1)	7%
Total	100%

(1) Primarily due to lack of feature unique to particular show, for example, lack of interest in country music, or only rotate to "oil patch" areas.

EXHIBIT 2.1 – 10
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
BALLROOM ANALYSIS

Square Footage of Ballroom	Utilization %	Square Footage of Ballroom	Utilization %	Square Footage of Ballroom	Utilization %	Square Footage of Ballroom	Utilization %
100,000 NSF +		**50,000 NSF – 100,000 NSF**		**10,000 NSF – 50,000 NSF**		**Less than 10,000 NSF**	
96,000	100%	80,200	100%	71,300	100%	24,000	100%
90,000	95%	67,300	95%	45,000	95%	24,000	95%
75,600	90%	40,500	90%	40,000	90%	15,000	90%
75,600	85%	40,500	85%	36,000	85%	15,000	85%
31,200	80%	31,900	80%	30,000	80%	13,000	80%
31,200	75%	21,000	75%	24,000	75%	10,800	75%
27,000	70%	21,000	70%	21,000	70%	10,800	70%

Note: As outlined in this analysis, a minimum of 40,000 square feet of ballroom space would be required to accommodate most event types. In order to accommodate the largest potential events, as well as concurrent mid–sized events, additional ballroom space may occasionally be required. In such cases the flexibility to convert portions of the exhibition hall into ballroom space would be critical.

It is clear from this chart that the geographic region of the State within the country is a primary reason for negative responses. This supports the organizer preference data presented in Exhibit 1.3-4 of section 1. Approximately 40 to 50 percent of the negative responses could be attributable to region and weather factors. Many of the other factors such as lack of event history, cost, union issues, familiarity and other such items could be mitigated to some degree through marketing efforts.

Exhibition Space Event Summary

Within the Commonwealth of Massachusetts, sites located in Boston/Cambridge provide the potential market strength to justify significant levels of exhibition space demand. Within this area, a megaplex concept combining convention/exhibition space with a professional sports stadium could be supported from a market perspective, and warrants further economic, financial and architectural analysis. The development of a megaplex facility would allow for the accommodation of both convention/exhibition and fixed seating event markets. As a result, the overall megaplex utilization levels would be significantly higher compared to levels achieved at a stand alone stadium.

The development of such a megaplex concept in other regions throughout the State would not likely provide for event utilization levels which are sufficient to justify the facility from a market perspective. Focus instead should be placed on the stadium only component as a potential development option on various sites throughout the State.

Within the remainder of this section, we present an analysis of the fixed seating or stadium event market, the potential event levels and how various sites could impact these event levels.

At this point in the analysis, we have not focused on the interrelationships between the Hynes Convention Center, or the impacts of the project on the existing hotel and other visitor amenities. These issues will be addressed in later stages of project analysis.

2.2 Fixed Seating Utilization

The development of a professional sports stadium can involve a number of different facility concepts, including open-air or domed roof structures. The purpose of this analysis is to evaluate the non-sporting and sporting event levels that various stadium development options could attract. The results of this analysis will then be used to determine the viability of further detailed analysis of the stadium concept, and how the site of the facility could impact this viability.

Based on our analysis of local existing sports, entertainment and exhibition facilities in Massachusetts, experiences of similar stadiums, and interviews with promoters of these various events, a range of potential facility utilization has been prepared for the proposed stadium development, both as an open-air and a domed venue. Our market analysis experience working on similar projects in Washington D.C.; Buffalo, New York; Cleveland, Ohio; Philadelphia, Pennsylvania and other professional sports markets throughout the country enables us to thoroughly analyze and quantify the event potential for the proposed fixed seating project. These estimates have been prepared for a stabilized year of operations. Descriptions and estimates of events are outlined as follows:

2.21 Non-Sporting Events

The level of non-sporting events such as concerts and motor sports events held at stadium facilities is largely a function of local economic and demographic considerations. In Exhibits 2.2-1 and 2.2-2, we present a summary of non-sporting event levels for various comparable markets. These totals, combined with our analysis of event markets within the State, have been used to estimate the event levels outlined below:

Concerts - The primary venues for concert events are arenas and amphitheaters. Capacities at these facilities generally range from 17,000 to 25,000, and are well suited to typical concert attendance levels. Several times per year, a performer or performers will generate attendance levels higher than the capacity of standard arena facilities. These events are primarily held at sports stadiums, usually domed facilities. The actual number of large touring acts varies from year to year. Based on discussions with area concert promoters and other such analysis, annual concert events levels are estimated to range between 2 to 4, depending on the facility roof structure. These estimates are outlined in Exhibits 2.2-1 (Open-air) and 2.2-2 (Domed), along with event levels for several comparable stadiums around the country. As outlined in the Exhibits, the lowest number of concerts hosted by a stadium is zero, while the highest number of concerts among those surveyed is 6 performances conducted at the Toronto Skydome.

Motor Sports/Other - Based upon discussions with national promoters of motor sports shows, it has been estimated that the proposed stadium could host 2 motor sport shows throughout the year with either a domed or open-air stadium facility.

EXHIBIT 2.2-1
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
ANNUAL EVENT LEVELS – RECENT 12 MONTH CALENDAR
COMPARABLE OPEN-AIR STADIUMS

Events	Giant Stadium East Rutherford, New Jersey	Tampa Stadium Tampa, FL	L.A. Memorial Coliseum Los Angeles, CA	Veterans Stadium Philadelphia, PA	Riverfront Stadium Cincinnati, OH	Jack Murphy Stadium San Diego, CA	Average	Projected Stadium Complex Massachusetts
Non Sporting Events								
Concerts	4	0	3	4	1	1	2	2 – 3
Motor Sports/Other (1)	4	2	2	0	0	3	2	2
Public Shows	1	2	0	0	0	0	1	0
Rodeos/Westerns	0	0	0	0	0	1	0	1
Other Events (2)	0	8	0	3	3	22	6	2 – 4
Total	*9*	*12*	*5*	*7*	*4*	*27*	*11*	*7 – 10*
Sporting Events								
College Football/ Baseball	5	2	5	17	3	7	7	2
Other Sports (3)	7	3	15	1	1	4	5	4
Total	*12*	*5*	*20*	*18*	*4*	*11*	*12*	*6*

Notes:
(1) Motor Sports/Other includes all motor sporting events, thrill shows, and circuses.
(2) Other Events include parking lot sales and rentals, barbeques, sports practices and clinics, stadium festivals, wrestling, and religious crusades.
(3) Other sports includes high school sporting events and exhibition soccer games.

Source: Coopers & Lybrand and Facility Management

EXHIBIT 2.2–2
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
ANNUAL EVENT LEVELS – RECENT 12 MONTH CALENDAR
COMPARABLE DOMED STADIUMS

Events	Kingdome Seattle, Washington	Pontiac Silverdome Pontiac, MI	Georgia Dome Atlanta, Georgia	Hubert H. Humphrey Metrodome Minneapolis, MN	Indianapolis Hoosier Dome Indianapolis, IN	Toronto Skydome Toronto, Canada	Average	Projected Stadium Complex Massachusetts
Non Sporting Events								
Concerts	0	2	2	0	4	6	2	3 – 4
Motor Sports/Other (1)	3	4	4	2	3	4	3	2
Public Shows	6	10	8	0	12	6	7	1 – 2
Rodeos/Westerns	0	0	0	0	0	0	0	1
Other Events (2)	3	14	8	9	4	0	6	4 – 5
Total	*12*	*30*	*22*	*11*	*23*	*16*	*19*	*11 – 14*
Sporting Events								
College Football/ Baseball	1	2	4	28	5	0	7	2
Other Sports (3)	2	11	9	13	15	2	9	4 – 6
Total	*3*	*13*	*13*	*41*	*20*	*2*	*16*	*6 – 8*

Notes:
(1) Motor Sports/Other includes all motor sporting events, thrill shows, and circuses.
(2) Other Events include parking lot sales and rentals, barbeques, sports practices and clinics, stadium festivals, wrestling, and religious crusades.
(3) Other sports includes high school sporting events and exhibition soccer games.

Source: Coopers & Lybrand and Facility Management

Public Shows - Public shows generally consist of product exhibitions geared towards the local population. Domed stadium venues are occasionally host to these types of events, especially those requiring high ceiling heights and other unique stadium accommodations. Based on the market analysis, it is estimated that 1 to 2 public show events could be accommodated at a domed stadium constructed within the State, depending on the number of competing facilities within the market. For example, a Boston stadium facility would have to compete with numerous other exhibition facilities, and may only attract 1 public or consumer show. Locations outside the Boston area could attract additional public show events annually depending on the specific market.

Other Events - Other events incorporate a wide variety of attractions including religious festivals, rodeo/western events, trade events, local private and public functions, and other such events which generally draw a high percentage of their attendance from the local area. Based on our review of comparable stadium projects, it is estimated that a new domed stadium in Massachusetts could attract between 4 and 5 other events of varying sizes, while an open-air facility could attract between 2 and 4 such events.

In addition to these annual event types, there is a potential to attract non-recurring events such as national political conventions, international and national sports festivals, and other such events. Due to their uncertain rotational patterns, we have not included these event types into our annual estimates.

2.22 Sporting Events

The level of potential non-professional sporting events such as college and high school sports is largely dependant on specific and unique conditions within a particular market. The number of schools, professionals sporting teams, alternative venues, and other such factors will impact facility non-professional sporting event levels. For example, the Metrodome in Minneapolis is host to the University of Minnesota football team, generating 6 to 8 events annually. There is no such university demand within the Seattle market, therefore the Kingdome plays host to only 3 non-professional sporting events annually. A summary of the non-professional sporting event totals prepared for this analysis for both the open-air and domed stadium facilities were presented in Exhibits 2.2-1 and 2.2-2.

Based on our analysis of other stadiums and discussions with the United States Soccer Association, the Massachusetts Interscholastic Athletic Association and other sports industry representatives, it is estimated that the proposed stadium could be host to approximately 6 other sporting events annually, regardless of roof structure. Naturally this total could change depending on potential changes in college and high school sporting program preferences.

As noted earlier in the report, professional sports teams are the primary tenants at major stadium facilities. Within the Commonwealth, there are currently four professional sports teams. For purposes of this report, we have assumed that the New Boston Garden would be the home of the Boston Celtics and Bruins, and that the Red Sox would continue to play at Fenway Park. The New England Patriots have been considered as a potential tenant at any new stadium development.

Potential event utilization from professional football is not subject to socioeconomic or other variables. Event levels would primarily consist of 8 regular season and 2 pre-season games. Attendance at professional football games can vary and often depends on the performance of the team and the local economic conditions. League average attendance levels have historically ranged from 60,000 to 70,000. Patriots attendance levels have historically ranged from 41,000 to 55,000. Attendance at a new stadium development could reach a level closer to the league averages provided that modern fan amenities are included as part of the project.

As part of this analysis, we have also developed preliminary estimates of the general seating, private suite and club seating specifications appropriate for the project. Our focus for these estimates has been on the Boston market, based on the assumption that such a major market facility would require specifications larger or as large as any other market in the State. This will ensure that any site/configuration analysis using these specifications which takes place as part of future project analyses will not understate the required building size.

In Exhibit 2.2-3, we present an analysis of the ratio of area population to average attendance levels for facilities throughout the NFL. As outlined in the Exhibit, the average population penetration is 1.61 percent. Applying this penetration rate to the Boston area population, a total average attendance of approximately 61,000 is estimated. However, this analysis includes three markets which are significantly different than any of the other NFL cities, specifically Green Bay (very low population) and New York and Los Angeles (high population levels.) Applying the penetration analysis without these cities, a total attendance level of approximately 75,000 is reached. Based on this analysis, stadium capacity of approximately 65,000 to 75,000 would be appropriate for this project.

EXHIBIT 2.2–3
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
NATIONAL FOOTBALL LEAGUE MSA DEMOGRAPHICS
POPULATION VS. AVERAGE ATTENDANCE

METROPOLITIAN AREA	TOTAL POPULATION	1991–1992 AVERAGE ATTENDANCE	ATTENDANCE POPULATION PENETRATION
Green Bay	196,000	52,271	26.67%
Buffalo	1,187,000	78,973	6.65%
New Orleans	1,236,000	67,593	5.47%
Kansas City	1,585,000	76,356	4.82%
Indianapolis	1,258,000	51,978	4.13%
Denver	1,860,000	74,410	4.00%
Cincinnati	1,752,000	58,151	3.32%
Pittsburgh	2,232,000	59,044	2.65%
Cleveland	2,755,000	71,694	2.60%
Minneapolis	2,501,000	61,089	2.44%
Seattle	2,601,000	63,358	2.44%
Tampa	2,110,000	50,188	2.38%
Phoenix	2,170,000	43,995	2.03%
Miami	3,241,000	62,452	1.93%
San Diego	2,562,000	49,075	1.92%
Atlanta	2,915,000	54,954	1.89%
Houston	3,742,000	61,650	1.65%
Dallas	3,964,000	61,647	1.56%
Washington D.C.	3,988,000	54,692	1.37%
Detroit	4,673,000	63,139	1.35%
Philadelphia	5,937,000	65,469	1.10%
San Francisco	6,334,000	65,345	1.03%
New York *	18,030,000	151,401	0.84%
Chicago	8,092,000	66,153	0.82%
Los Angeles *	14,824,000	118,806	0.80%
Average Penetration	4,069,800	67,355	1.61% **
Boston (actual)	3,791,000	41,031	1.08%
Boston	3,791,000	60,911 ***	1.61% **
Boston	3,791,000	75,130 ***	1.98% ****

* Markets include two NFL teams as indicated by average attendance figures.
** Average does not include penetration percentage in Green Bay.
*** Attendance level derived by multiplying the population by the average penetration.
**** Penetration ratio excludes Green Bay, New York, and Los Angeles.

Summary: The penetration analysis indicates that a stadium capacity of approximately 60,000 – 75,000 would be appropriate.

Source: **NFL offices, stadium management, industry periodicals.**

The inclusion of private suites in any stadium development has become a critical component to the overall financing of projects throughout the country. The primary customer for these suites is generally larger area corporations. In order to analyze the potential suite levels justified for this project, we have prepared a penetration analysis of suites to major companies (those with annual revenue over $5 million.) Based on this analysis, presented in Exhibit 2.2-4, a total of 250 to 310 suites could be supported. Fenway Park and the New Boston Garden currently account for approximately 150 of this potential. As a result, a new stadium facility could support approximately 120 to 160 private suites as outlined in Exhibit 2.2-5.

Similar to private suites, club seats have played an important role in the revenue generating potential of professional sports stadiums. Exhibit 2.2-6 presents a penetration analysis of club seats to major companies. The market for club seats also includes segments of the general population. Exhibit 2.2-7 presents a penetration analysis of club seats to population levels. These Exhibits indicate that the market could support between 6,000 and 9,500 club seats. As outlined in Exhibit 2.2-8, a new stadium may support between 5,000 and 7,000 seats.

It should be noted that the analysis outlined above for general seating, private suites and club seats is based solely on a comparable market ratio methodology. Specific corporate and fan spending characteristics and other such unique factors, which have not been measured as a part of this initial analysis, could impact the seating, suite and club seat estimates.

Fixed Seating Event Summary

The potential event levels for a professional sports stadium located in the State are comparable to other such venues around the country. Some unique event types have been identified in this analysis (i.e. Rodeo/Western events), and others will likely be generated as the facility continues to operate.

As part of this analysis, we have also considered the interaction between the New Boston Garden and a potential new stadium development. In general, there is a distinction between events suitable for stadium venues, and arena facilities. For example, concerts that tend to be played in arenas differ significantly from those concerts that are played in larger stadiums. Similarly, the majority of family shows that require a more intimate setting are more likely to use arenas than stadiums. As a result, we do not expect an impact on event estimates for the proposed stadium as a result of the New Boston Garden. Similarly, there should be no significant impacts from the development of a new stadium facility on the long term event levels at the New Boston Garden.

EXHIBIT 2.2–4
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
SELECTED SPORTS FACILITIES MARKETS
PRIVATE SUITE CORPORATE PENETRATION ANALYSIS

METRO AREA	COMPANIES WITH REVENUE > $5 MIL	PRIVATE SUITES MARKET WIDE	RATIO OF COMPANIES TO PRIVATE SUITES	% OF COMPANIES WITH REVENUE > $25 MIL
New York City	15,434	284	54 : 1	26%
Houston	4,467	140	32 : 1	30%
Philadelphia *	5,440	249	22 : 1	25%
San Francisco *	4,709	219	22 : 1	25%
Denver *	2,100	127	17 : 1	24%
Minneapolis	3,112	202	15 : 1	21%
Atlanta	3,454	228	15 : 1	27%
Chicago	6,739	489	14 : 1	25%
Kansas City	1,223	99	12 : 1	32%
Phoenix	1,795	147	12 : 1	22%
Washington, D.C. *	4,163	371	11 : 1	26%
Miami	2,564	233	11 : 1	20%
Tampa *	1,595	145	11 : 1	25%
Detroit	3,901	365	11 : 1	19%
Pittsburgh	1,489	146	10 : 1	31%
New Orleans	954	132	7 : 1	25%
Cleveland *	1,893	320	6 : 1	31%
Average	3,946	224	17 : 1	25%
Average without New York	3,100	226	14 : 1	26%
Boston (actual)	4,281	189	23 : 1	27%
Boston	4,281	252 **	17 : 1	27%
Boston	4,281	268 **	16 : 1	27%
Boston	4,281	285 **	15 : 1	27%
Boston	4,281	306 **	14 : 1	27%

* Number of private suites market wide includes those in planned facilities which have not yet been sold.

** Number of private suites is derived by dividing the number of corporations by the various penetration ratios.

Source: Dun & Bradstreet Market Identifiers and facility management.

EXHIBIT 2.2–5
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
PRIVATE SUITE ANALYSIS

Market Wide Suite Total	189 (Fenway, New Boston Garden, Foxboro)
Foxboro Stadium	42
Market Wide Suites w/o Foxboro	147

Market Wide Suite Potential Assuming:	**Potential Market Wide Suites**	**Potential Suites for New Stadium**
17:1 Company/Suite Ratio	252	105
16:1 Company/Suite Ratio	268	121
15:1 Company/Suite Ratio	285	138
14:1 Company/Suite Ratio	306	159

EXHIBIT 2.2–6
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
SELECTED SPORTS FACILITIES MARKETS
CLUB SEAT CORPORATE PENETRATION ANALYSIS

METRO AREA	COMPANIES WITH REVENUE > $5 MIL	CLUB SEATS MARKET WIDE	RATIO OF COMPANIES TO CLUB SEATS	% OF COMPANIES WITH REVENUE > $25 MIL
Detroit	3,901	2,000	1.95 :1	32%
Chicago	6,739	4,960	1.36 :1	25%
Denver *	2,100	1,606	1.31 :1	24%
Kansas City	1,223	2,000	0.61 :1	32%
Houston	4,467	8,000	0.56 :1	30%
Atlanta	3,454	9,094	0.38 :1	27%
Tampa *	1,595	4,500	0.35 :1	25%
Washington, D.C. *	4,163	15,046	0.28 :1	26%
Miami	2,564	9,279	0.28 :1	20%
Phoenix	1,795	6,700	0.27 :1	22%
Average	3,200	6,319	0.73 :1	26%
Boston	4,281	5,831 **	0.73 :1	25%
Boston	4,281	4,077 ***	1.05 :1	25%
Boston	4,281	5,036 ***	0.85 :1	25%
Boston	4,281	5,708 ***	0.75 :1	25%
Boston	4,281	6,586 ***	0.65 :1	25%
Boston	4,281	7,784 ***	0.55 :1	25%
Boston	4,281	9,513 ***	0.45 :1	25%

* Number of club seats market wide currently includes those in planned facilities which have not yet been sold.

** Club seats is derived by dividing 4,281 by the average ratio of companies to club seats.

*** Number of club seats derived by dividing the number of corporations by the various penetration ratios.

Source: Dun & Bradstreet Market Identifiers and facility management.

EXHIBIT 2.2–7
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
SELECTED SPORTS FACILITIES MARKETS
CLUB SEAT POPULATION PENETRATION ANALYSIS

METRO AREA	POPULATION	CLUB SEATS MARKET WIDE	RATIO OF POPULATION TO CLUB SEATS	% OF COMPANIES WITH REVENUE > $25 MIL
Detroit	4,673,000	2,000	2,337 :1	19%
Chicago	6,077,000	4,960	1,225 :1	25%
Kansas City	1,236,000	2,000	618 :1	32%
Tampa *	2,110,000	4,500	469 :1	25%
Houston	3,742,000	8,000	468 :1	30%
Miami	3,241,000	9,279	349 :1	20%
Phoenix	2,170,000	6,700	324 :1	22%
Atlanta	2,915,000	9,094	321 :1	27%
Denver *	1,860,000	6,106	305 :1	24%
Washington, D.C. *	3,988,000	15,046	265 :1	26%
Average	3,201,200	6,769	473 :1	25%
Boston (actual)	3,791,000	3,286	1,154 :1	27%
Boston	3,791,000	8,016 **	473 :1	27%
Boston	3,791,000	3,991 ***	950 :1	27%
Boston	3,791,000	5,055 ***	750 :1	27%
Boston	3,791,000	5,832 ***	650 :1	27%
Boston	3,791,000	6,893 ***	550 :1	27%
Boston	3,791,000	8,424 ***	450 :1	27%
Boston	3,791,000	9,478 ***	400 :1	27%

* Number of club seats market wide includes those in planned facilities which have not yet been sold.

** Club seats is derived by dividing the population by the average penetration.

*** Number of club seats derived by dividing the population by the various penetration ratios.

Source: Dun & Bradstreet Market Identifiers and facility management.

EXHIBIT 2.2–8
MASSACHUSETTS STADIUM/EXHIBITION COMPLEX ANALYSIS
CLUB SEAT ANALYSIS

Market Wide Club Seat Total 2,900 (Fenway and New Boston Garden)

Market Wide Suite Potential Assuming:	**Potential Market Wide Club Seats**	**Potential Club Seats for New Stadium**
450:1 Population/Club Seat Ratio	8,242	5,342
400:1 Population/Club Seat Ratio	9,478	6,578

Finally, in terms of facility location, our analysis of event organizer preferences does not point to a specific site as significantly superior to others in terms of attracting events. Event organizers noted that one of their primary concerns focused on the availability of strong population base within the general area. Unlike the convention and trade show industry, adjacent or nearby hotel and other visitor attractions are not a primary consideration.

As a result, a stadium only development could be successful in generating event levels comparable to other professional sports facilities on various sites throughout the State. At this point in the analysis, we do not specify those specific sites which could accommodate potential stadium development. Such an analysis would involve general estimates of the ability of the stadium facility to attract attendance from varying distances, and would be difficult to provide based on this preliminary analysis.

In order to arrive at specific sites for which stadium only development could take place and for which further analyses will be provided, Sverdrup Corporation and the architectural firm of HNTB have prepared an analysis of each of the 21 sites from throughout the State which have been submitted through the request for sites issued in August of this year.

COMMONWEALTH OF MASSACHUSETTS

PROFESSIONAL SPORTS AND EXHIBITION COMPLEX FEASIBILITY ANALYSIS

INTERIM REPORT

SECTION III:
Preliminary Site Evaluation of Proposed Stadium and Exhibition Facilities

November 4, 1992

PREFACE

In July and August of 1992, the Division of Capital Planning and Operations (DCPO) and the Executive Office of Economic Affairs (EOEA) of the Commonwealth of Massachusetts carried out a REQUEST FOR SITES process to elicit information regarding possible sites for a potential multi-purpose sports/exhibition hall complex in Massachusetts. Twenty sites in seventeen communities were nominated.

The consulting team is reviewing the information submitted to analyze the twenty sites. A three step screening process based on objective criteria and increasing level of detail at each step is being used to screen the twenty sites down to the two most promising sites for further consideration. This report documents Step One of the Screening Process.

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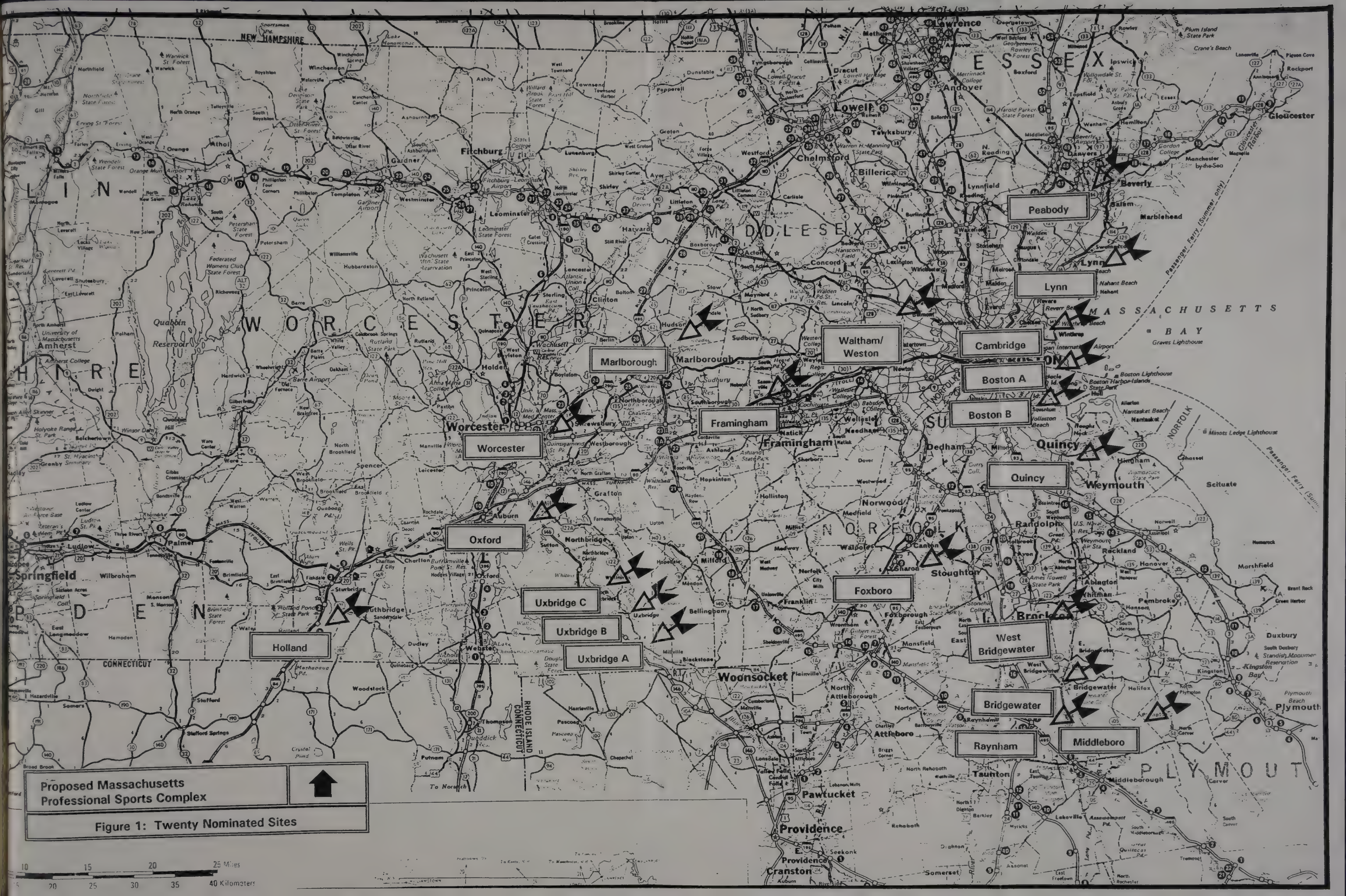
PROPOSED MASSACHUSETTS PROFESSIONAL SPORTS COMPLEX

1. PROPOSED SITES

In response to the DCPO and EOEA REQUEST FOR SITES, twenty sites were proposed for consideration as locations for the proposed Massachusetts Professional Sports Complex. The sites are located in the following communities:

- Boston (Two)
- Bridgewater
- Cambridge
- Foxboro
- Framingham
- Holland
- Lynn
- Marlborough
- Middleboro
- Oxford/Auburn
- Peabody
- Quincy
- Raynham
- Uxbridge (Three)
- Waltham/Weston
- West Bridgewater
- Worcester

The seventeen communities in which the twenty sites are located are shown in **Figure 1**, below. Refer to **Figures 2-18**, following Section 5, to see each individual site on 1:25000 USGS quadrangle map sheets.



Proposed Massachusetts Professional Sports Complex

Figure 1: Twenty Nominated Sites

Two of the sites, one of the Boston sites and the Cambridge site, are located adjacent to the downtown Boston core. The second Boston site is centrally located within the City of Boston between the Dorchester, Jamaica Plain and Roslindale neighborhoods. Four of the sites, in Lynn, Peabody, Quincy and Waltham, are located within the metropolitan Boston area, with the last three adjacent to the Route 128 circumferential highway. Two sites, the Framingham and Marlborough sites, are located in the Metrowest area, and six sites, those in Worcester, Oxford, Holland and Uxbridge (with three proposed sites) are in central Massachusetts. Four sites, in Bridgewater, West Bridgewater, Raynham and Middleboro, are located in southeastern Massachusetts, with the Foxboro located southwest of Boston.

Four of the sites, in Boston, Cambridge, Lynn and Worcester, are in urban settings and currently in industrial use. The second Boston site is located in a primarily institutional area consisting of hospital, cemeteries and parks, with nearby residential areas. Seven sites, Foxboro, Framingham, Marlborough, Middleboro, Peabody, Quincy and Waltham/Weston are in suburban locations of developing office parks and highway commercial activities. Six sites, Bridgewater, Holland, Oxford, Raynham, Uxbridge, and West Bridgewater, are open sites in largely rural areas.

2. SITE EVALUATION PROCESS

The twenty sites will be evaluated using a three step screening process based on evaluation criteria derived from industry norms. The first step, which is the subject of this report, involves an initial screening review of all twenty sites utilizing the four broad threshold criteria identified in the REQUEST FOR SITES, namely (1) Transportation, (2) Environment, (3) Parcel Size and Configuration, and (4) Location. The objective was to identify the most promising sites to be evaluated in greater detail in the second step of the site selection process. Site description details were taken from the information submitted by applicants in the REQUEST FOR SITES. The evaluation was based on established secondary information sources such as the National Wetlands Inventory mapping for wetlands, Federal Emergency Management Agency mapping for floodplains, etc. Sites which present major physical, transportation, or other impediments to expeditious and successful facility development were eliminated from further consideration at this step.

In Step Two of site selection, more detailed criteria will be established and used to rank the sites numerically. Concept plans will be developed for the four sites with the highest numerical ranking. Finally, proposed Implementation Programs will be presented for the two most promising locations.

	Number of sites	
Site Evaluation	Evaluation Sites	Final Sites
Step One: Screening Process	20	7
Step Two: Numerical Ranking	7	4
Implementation Programs	2	2

3. STEP ONE: SCREENING PROCESS

All twenty of the nominated sites were studied in order to eliminate those which fail to meet minimally acceptable criteria from the following four standpoints:

A. Transportation
B. Environment
C. Parcel Size and Configuration
D. Location

The purpose of this stage of the site evaluation process was to eliminate those sites that:

- lack one or more elements of transportation infrastructure that are essential to a successful project.

- have environmental characteristics that make a successful project either problematic or would lead to a protracted and expensive environmental permitting process with an uncertain outcome.

- are substandard from either a parcel size or configuration standpoint.

- lack adjacent demographic characteristics and facilities that are essential for a major sports complex to be a success.

The sites were not numerically ranked with respect to these criteria. Rather, sites were eliminated if they did not fulfill each of the minimum requirements described below. As such the rating has been done on a simple **YES/NO** basis. The specific criteria used to evaluate each of the twenty sites are as follows:

A. Transportation Criteria:

In order to survive the Step One site screening process, a site must either have the following transportation infrastructure in place or there must be an approved Federal Record of Decision (ROD) and State Certificate to develop this infrastructure under the respective environmental review processes:

- Access to a limited access highway of interstate standard within one-half mile of the site or adjacent to a state numbered arterial roadway

- Fixed rail passenger line within one-half mile of site.

- Capacity for the construction of 15,000 to 20,000 surface or structured parking spaces.

B. Environmental Criteria:

In order to survive the Step One screening process, each site must meet the following criteria:

- The site must have a minimum of 40 to 60 contiguous acres of upland. The definition of "upland" is land not regulated by Section 404 of the Federal Clean Water Act or land not requiring fill pursuant to the Massachusetts Wetlands Protection Act; in other words, land that is not

wetland.

- No portion of the site may be a designated a National Priority Site under the Federal Superfund law.

- No site may be located within an Area of Critical Environmental Concern.

- Sites must have a minimum of 40 to 60 acres of land not located in the 100 year floodplain, as defined by the Federal Emergency Management Agency.

C. Parcel Size and Configuration Criteria:

In order to survive the Step One screening process, a site must meet the following criteria:

- The site must include a minimum of 40 contiguous and accessible acres of land to accommodate construction.

- The site must have an area at least 1000 feet long and 700 feet wide for the facility "footprint".

D. Location Criteria:

In order to survive the Step One screening process, the site must meet the following criteria:

- The site must be located within 50 miles travel distance of the primary patron base for the intended events.

- The site must be located within an urbanized area over 100,000 population, as defined by the 1990 US Census. (As well as providing a local patron base, a local population base is needed to staff and maintain the facility.)

◆ The surrounding areas should support, or at least not prohibit, the anticipated events to be held at the facility. (For example, noise impact from an airport, odor from an industrial complex, fog from adjacent low lying areas, etc., are identifiable factors which would not support such a facility)

◆ The site should not create an adverse effect on the surrounding properties due to the nature of the events to be held in the facility. (For example, impact of facility noise on residential areas, parklands, or wildlife refuges, expected traffic peaks on nearby community facilities, etc., are identifiable impacts of such a facility.)

The critical flaw screening was done on a **YES/NO** basis. Each of the twenty sites that met a criterion were given a **YES** for that particular parameter. Conversely, those sites which did not meet the criterion were given a **NO**. A **NO** in for any one of the criteria is sufficient to eliminate the site from further consideration. As such, the result of the Step One process was to eliminate sites which failed to meet the criteria described above.

4. SUMMARY OF STEP ONE SCREENING RESULTS

The following seven sites meet all Step One criteria:

- Boston A
- Boston B
- Cambridge
- Foxboro
- Framingham
- Lynn
- Worcester

The following thirteen sites do not meet the Step One screening criteria.

- Bridgewater
- Holland
- Marlborough
- Middleboro
- Oxford/Auburn
- Peabody
- Quincy
- Raynham
- Uxbridge A
- Uxbridge B
- Uxbridge C
- Waltham/Weston
- West Bridgewater

The Step One ratings of the twenty nominated sites are summarized in **Table 1**, while the specific factors causing sites to fail Step One screening are shown in **Table 2**.

In summary, eleven of the thirteen sites (all except Middleboro and Quincy) which did not meet Step One screening criteria were more than two miles from a fixed rail line which is active or undergoing restoration. Most of the sites which did not pass Step One Screening were five or more miles away from a rail line which is active or undergoing restoration.

Four of the sites (Bridgewater, Holland, Middleboro, and Waltham/Weston) included substantial wetlands.

Table 1
STEP ONE RATINGS OF TWENTY NOMINATED SITES

SITE	TRANSPORTATION	ENVIRONMENT	PARCEL	LOCATION
BOSTON A	Y	Y	Y	Y
BOSTON B	Y	Y	Y	Y
BRIDGEWATER	N	N	Y	N
CAMBRIDGE	Y	Y	Y	Y
FOXBORO	Y	Y	Y	Y
FRAMINGHAM	Y	Y	Y	Y
HOLLAND	N	N	Y	N
LYNN	Y	Y	Y	Y
MARLBOROUGH	N	Y	Y	Y
MIDDLEBORO	N	N	Y	N
OXFORD/AUBURN	N	Y	Y	Y
PEABODY	N	Y	Y	Y
QUINCY	N	Y	Y	Y
RAYNHAM	N	Y	Y	Y
UXBRIDGE A	N	Y	Y	Y
UXBRIDGE B	N	Y	Y	Y
UXBRIDGE C	N	Y	Y	Y
WALTHAM	Y	N	Y	Y
WEST BRIDGEWATER	N	Y	Y	Y
WORCESTER	Y	Y	Y	Y

CRITERIA:

A. **Transportation:**	Highway, transit, parking
B. **Environment:**	Wetlands, compatibility to adjacent uses, hazardous waste
C. **Parcel:**	Size and configuration
D. **Location:**	Demographics, adjacent facilities

Y = Yes, site meets minimum criteria
N = No, site does not meet minimum criteria

Table 2
FACTORS CAUSING SITES TO FAIL
STEP ONE SCREENING

- Bridgewater
- Marlborough
- Oxford/Auburn
- Quincy
- Uxbridge A,B,C
- West Bridgewater
- Holland
- Middleboro
- Peabody
- Raynham
- Waltham/Weston

SITE	TRANSPORTATION	ENVIRONMENT	PARCEL	LOCATION
BRIDGEWATER	R	W,F		E
HOLLAND	R	W		U,E
MARLBOROUGH	R			
MIDDLEBORO	R	W		U
OXFORD/AUBURN	R			
PEABODY	R			
QUINCY	R			
RAYNHAM	H,R			
UXBRIDGE A	R			
UXBRIDGE B	R			
UXBRIDGE C	R			
WALTHAM		W,F		
WEST BRIDGEWATER	R			

CRITERIA KEY

A. **Transportation:** Highway, transit, parking

H = Highway	Site does not have access to highway within one-half mile or adjacency to state numbered arterial
R = Rail	Site is not within one-half mile of fixed passenger rail
P = Parking	Site does not have the capacity for construction of 15,000 to 20,000 parking spaces

B. **Environment:** Wetlands, compatibility to adjacent uses, hazardous waste

W = Wetlands	Site does not have 40-60 contiguous acres of upland
S = Superfund	Site is designated a National Priority Site
A = ACEC	Site is located within an Area of Critical Environmental Concern
F = Floodplain	Site does not have 40-60 contiguous acres outside the floodplain

C. **Parcel:** Size and configuration

B = Bldg. area	Site does not have minimum 40 acres contiguous, accessible area
F = Footprint	Site does not have minimum 1000 x 700 foot facility footprint

D. **Location:** Demographics, adjacent facilities

D = Distance	Site is not located within 50 miles of patron base
U = Urbanized	Site is not within urbanized area over 100,000 population
S = Support	Surroundings do not support/prohibit events
E = Effect	Site does not create adverse effect on surroundings

5. NARRATIVE DESCRIPTION OF SITES AND STEP ONE SCREENING RESULTS

BOSTON:

A. The "South Bay Gateway" is a 42 acre site at the junction of I-90 (Mass Turnpike) and I-93/Route 3 (Southeast Expressway) in the South Bay section of South Boston. The site is about 70% privately owned and in use by food wholesalers, and about 30% municipally owned and used for municipal vehicle repair, towing storage and a dormant city incinerator. The site is accessible to MBTA Red Line Stations at Andrew and Broadway. The site is also served by the MBTA Midland Branch commuter rail line, which was used for passenger service during construction of the Southwest Corridor, and is maintained to test repair vehicles. The site is adjacent to the Old Colony Railroad Line, which is in the process of restoration, and the Massachusetts Avenue connector to the South Boston Haul, or Bypass, Road, which is under construction as part of the Central Artery project.

Step One Screening Results: The South Bay Gateway passed all Step One screening criteria.

B. The 195 acre Boston State Hospital site is located between the Dorchester, Jamaica Plain and Roslindale neighborhoods of Boston and is accessible via Morton Street (Route 203), the American Legion Highway and Blue Hill Avenue (Route 28). The site is in an area of cemeteries and parks, including Franklin Park, with residential areas nearby. The site itself contains a series of institutional buildings formerly housing the Boston State Hospital and most recently used to provide social services. MBTA Forest Hills station on the Orange Line as well as the AMTRAK and MBTA Shore Line and MBTA Midlands Branch railroad lines are nearby.

Step One Screening Results: The Boston State Hospital site passed all Step One screening criteria.

BRIDGEWATER:

This privately owned 145 acre site is bounded by Route 104 on the south, Route 24 on the west and Route I-495 on the north. The site has previously been proposed for the Indian Mound Office Park and Bridgewater Crossing Mall.

Step One Screening Results: The Bridgewater site did not pass Step One screening due to its location approximately 3 1/2 miles from the nearest commuter rail passenger line (Old Colony) and the presence and location on the site of extensive wetlands and 100 year floodplain associated with Titicut Swamp. In addition, a proposed sports complex would be likely to conflict with the surrounding land uses, particularly the Hockomock Swamp Wildlife Management Area.

CAMBRIDGE:

The 46 acre site located in East Cambridge with portions in Somerville and the Charlestown section of Boston is known as the Boston and Maine Railroad Piggyback Yard. The MBTA Green Line and the McGrath Highway (Routes 28 and 38) border the site on the west; Route I-93, the MBTA Orange Line and MBTA North Side Commuter Rail Lines border the site on the east; and the Gilmore Bridge borders the site on the south. The site has previously been proposed for "Northpoint", a mixed use development of housing, office space, retail space and public park.

Step One Screening Results: The Cambridge site passed all Step One screening criteria.

FOXBORO:

The 336 acre privately owned site is the location of Foxboro Stadium and Foxboro Race Track. The site is bordered by Route 1 and a spur from the MBTA Attleboro commuter rail line which is used for train service from South Station to the Stadium for selected events.

Step One Screening Results: The Foxboro site passed all Step One screening criteria.

FRAMINGHAM:

This 150 acre site is located at the intersection of I-90 (the Massachusetts Turnpike) and Route 9. In private ownership, the site has been planned for a mixed use park called "9/90 Crossing", consisting of two million square feet of office space, hotel and retail space. The AMTRAK rail line connecting Boston with Framingham and Worcester, with restoration of commuter rail service underway, is across the Massachusetts Turnpike from the site.

Step One Screening Results: The Framingham site passed all Step One screening criteria.

HOLLAND:

This 236 acre site is located on the Connecticut/Massachusetts border between I-84 and Mashapaug Road, the connecting road to I-90, the Massachusetts Turnpike. The open site is in private ownership.

Step One Screening Results: The Holland site did not pass Step One screening criteria due to its distance from fixed rail passenger service, the presence and location on the site of wetlands associated with the Leadmine Brook system, and location outside an urbanized area. In addition, surrounding land uses such as Hamilton Reservoir, Nipmuck State Forest, and Bigelow Hollow State Park present incompatibility problems.

LYNN:

The 65 acre site is located north of the Saugus River between Route 1A (the Lynnway) and Lynn Harbor. In private ownership, the land is used for commercial and industrial activities or is vacant. The MBTA Eastern Branch Commuter Rail Line is across Route 1A from the site and the MBTA Blue Line Wonderland Station is about three miles from the site.

Step One Screening Results: The Lynn site passed all Step One screening criteria.

MARLBOROUGH:

The 90 acre site is located at the junction of I-495 and I-290. This partially completed office park is in private ownership.

Step One Screening Results: The Marlborough site did not pass Step One screening criteria due to its distance from passenger rail service (roughly 5 miles from the Framingham rail line). In addition, development of the site would be problematic due to the proximity of wetlands and 100 year floodplain of the Assabet River.

MIDDLEBORO:

The 130 acre site is located north of the Middleboro Rotary, Routes 44 and I-495 and west of Routes 18/28. In private ownership, the site consists of the incomplete Commerce Park. The site is about two miles from the Middleboro line on the Old Colony commuter rail line which will be in active service in 1996.

Step One Screening Results: The Middleboro site did not pass Step One screening due to its approximate 2 mile distance from the nearest fixed passenger rail line (Old Colony), the presence and location of wetlands on the site according to the National Wetlands Inventory mapping, and location outside an urbanized area.

OXFORD/AUBURN:

This 134 acre site is located between I-395 and the Providence & Worcester Railroad on the Oxford and Auburn town line (119 acres in Oxford and 15 acres in Auburn). In private ownership, the site is subdivided for mixed use development including a hotel.

Step One Screening Results: The Oxford/Auburn site did not pass Step One screening due to distance from fixed passenger rail. In addition, development would be difficult due to the presence on-site of Chimney Pond, and Wellington Brook and its associated wetlands.

PEABODY:

This 138 acre site is located in the "Golden Triangle" bounded by Route 1 on the west, Route 128 on the south and Route 95 on the north and east. In public and private ownership, this undeveloped site is bordered by suburban office parks in a Designated Development District zone.

Step One Screening Results: The Peabody site did not pass Step One screening due to its distance, about 5 miles, from fixed passenger rail.

QUINCY:

This 160 acre site is located northwest of the intersection of the Southeast Expressway (Routes I-93/3) and Route 128. Called Yankee Heights, this partly developed mixed use commercial, hotel and residential park is privately owned and occupies the site of former granite quarries.

Step One Screening Process: The Quincy site did not pass step one screening due its 1.5 mile distance from the Quincy Adams station on the MBTA Red Line. The standing water in the quarries on the site would make the site difficult to develop.

RAYNHAM:

This 180 acre wooded site is located west of Locust Street and south of King Street between Routes 24 and I-495 and north of Route 44. The site is privately owned and about 5.5 miles from the Middleboro station on the Old Colony commuter railroad line which will be in active service in 1996.

Step One Screening Results: The Raynham site did not pass Step One screening due to its distance from a fixed rail commuter line and location greater than one-half mile from Route 44.

UXBRIDGE:

A. This 262 acre sand and gravel operation is located between Routes 146 and 146A on the Massachusetts/Rhode Island state border. The site is privately owned.

Step One Screening Results: The Uxbridge A site did not pass Step One screening due to its distance from fixed rail service. The occurrence on-site of Ironstone Reservoir, several isolated wetlands, and two streams and their associated wetlands would present significant environmental problems.

B. This 85 acre dairy farm near Route 146 is bordered by the Blackstone River and Route 146A. In private ownership, the site is being converted to the Quaker Industrial Park.

Step One Screening Results: The Uxbridge B site did not pass Step One screening due to its distance from fixed rail service.

C. This 309 acre wooded site is located at the intersection of Route 146 and Route 16. Owned by the FDIC and a private owner, the site is zoned industrial and agricultural.

Step One Screening Results: The Uxbridge C site did not pass Step One screening due to its distance from fixed rail service.

WALTHAM/WESTON:

The 100 acre quarry site is located straddling the Waltham/Weston border. Bounded on the east by Route 128, the north by Route 117 and the south by Route 20, the privately owned site is adjacent to the Fitchburg Line of the MBTA commuter rail system and is near Kendall Green station.

Step One Screening Results: The Waltham/Weston site did not pass Step One screening due to the presence of floodplain and substantial wetlands, including Stony Brook which bisects the site.

WEST BRIDGEWATER:

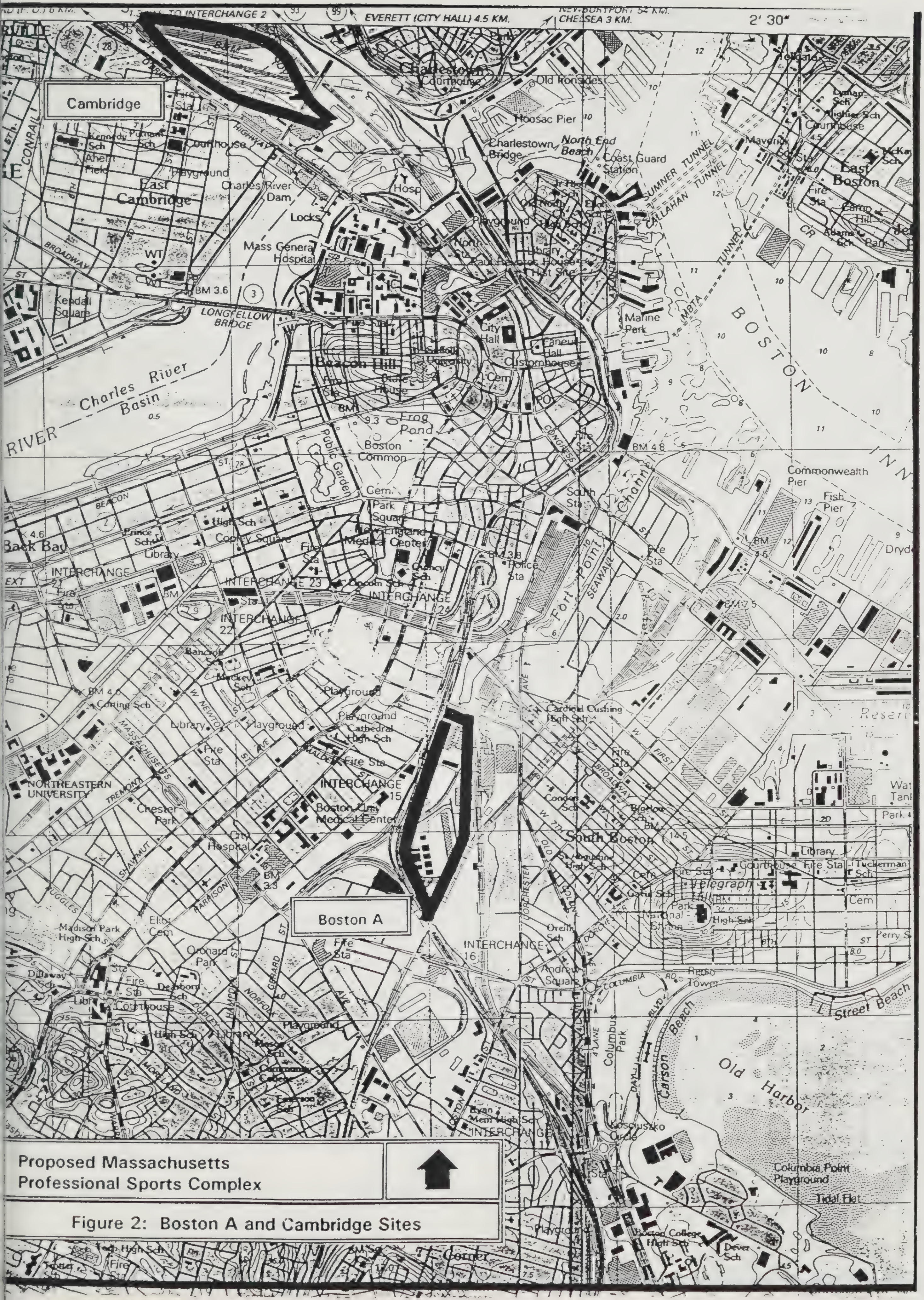
This 136 acre wooded site is in private ownership and is located adjacent to Route 24. Access to the site is via Route 24 to Route 106 to Manley Street to West Street. The site is adjacent to the West Bridgewater State Forest.

Step One Screening Results: The West Bridgewater site did not pass Step One screening due to its 2.5 mile distance from a fixed rail commuter line. The location and orientation of the wetlands on the site would pose difficulties to development, and adjacency to the West Bridgewater State Forest is a concern.

WORCESTER:

This approximately 81-86 acre site is located in downtown Worcester adjacent to Washington Square between Route I-290 and the Providence and Worcester railroad tracks. In private and public ownership, the site at present is largely used for industrial and commercial activities or is vacant. Plans are to redevelop adjacent Union Station, currently served by AMTRAK passenger rail, into an intermodal transportation center providing commuter and intercity rail and bus service.

Step One Screening Results: The Worcester site passed all Step One screening criteria.



Proposed Massachusetts
Professional Sports Complex

Figure 2: Boston A and Cambridge Sites

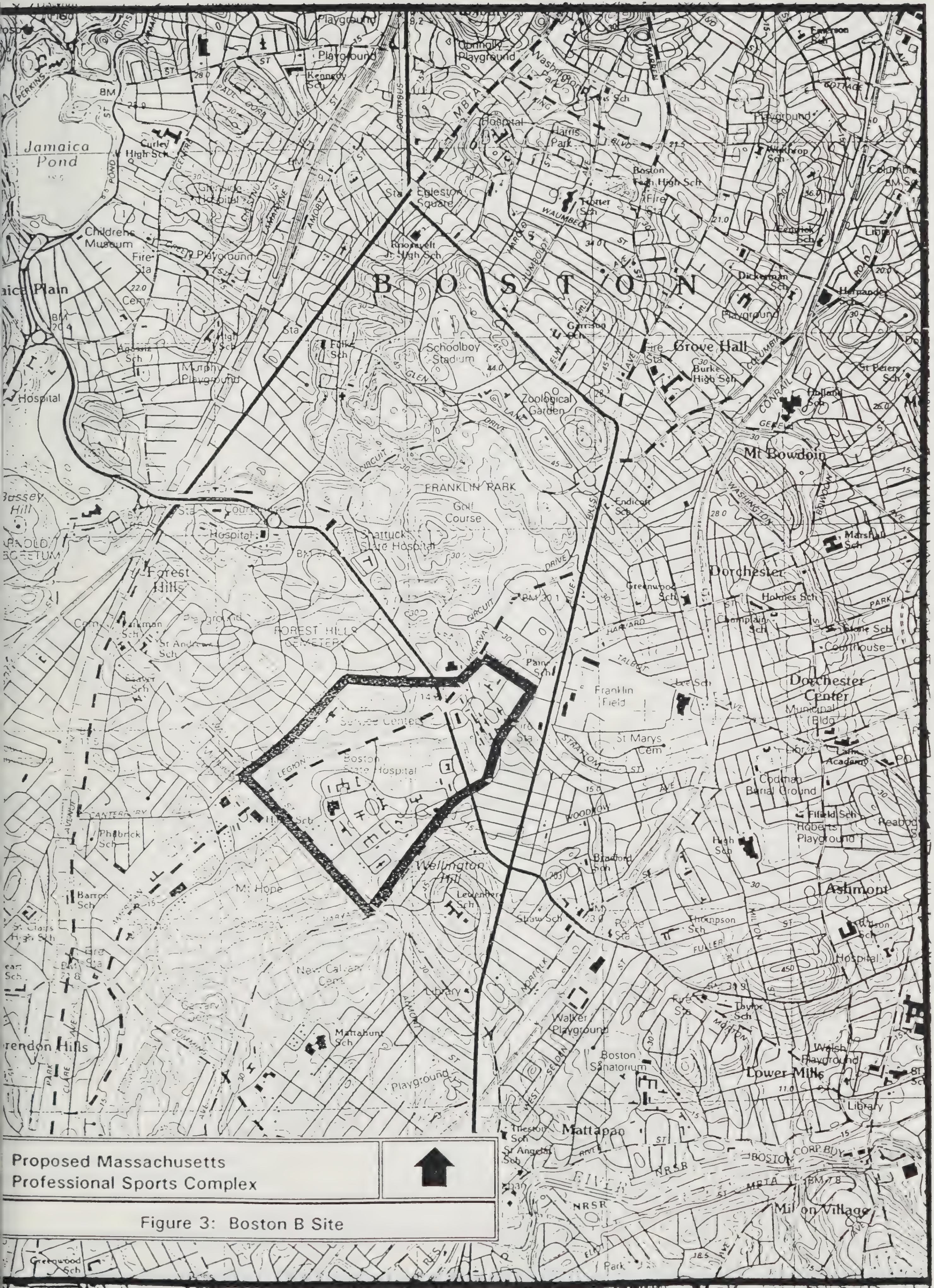


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Figure 3: Boston B Site

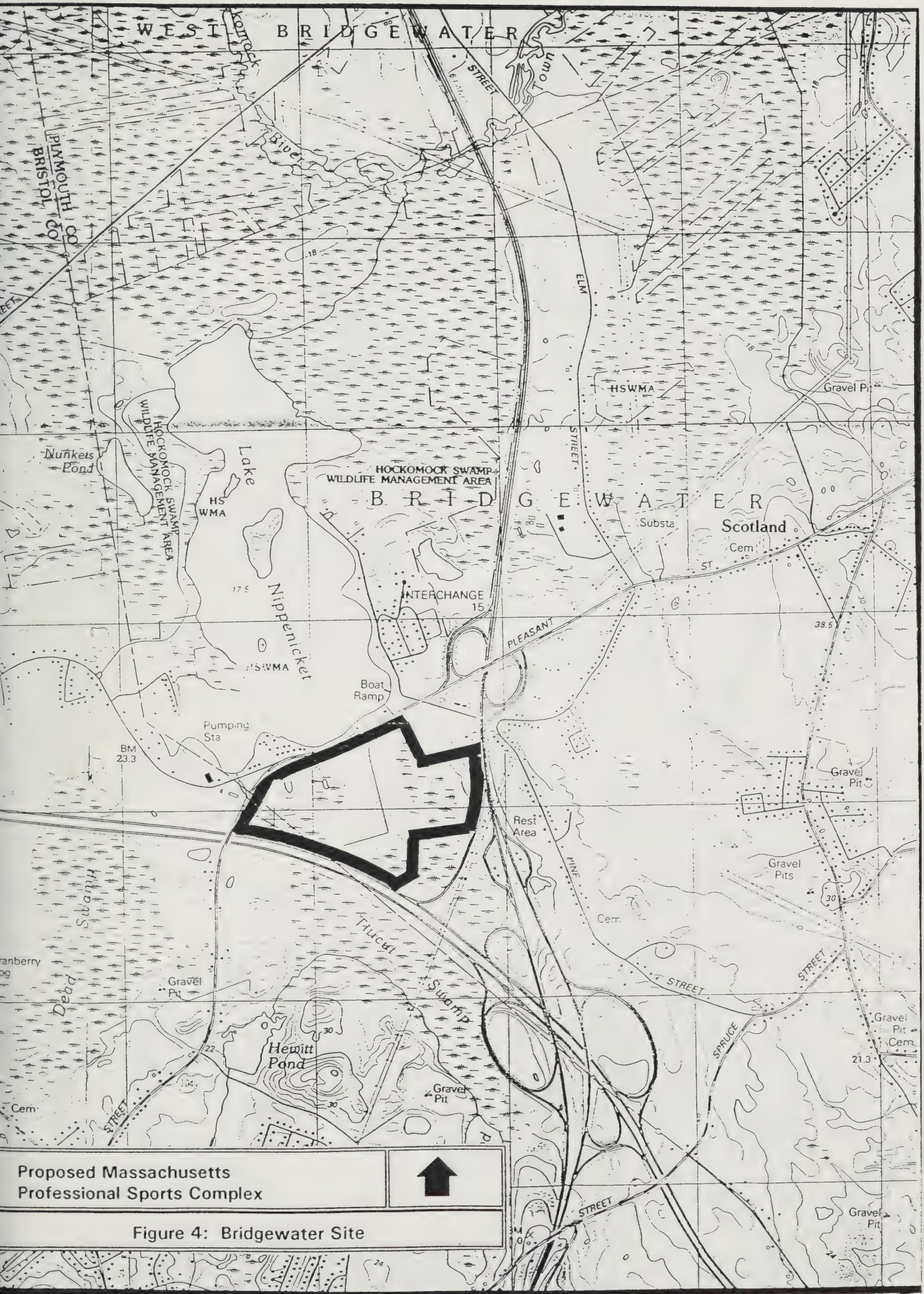

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Figure 4: Bridgewater Site

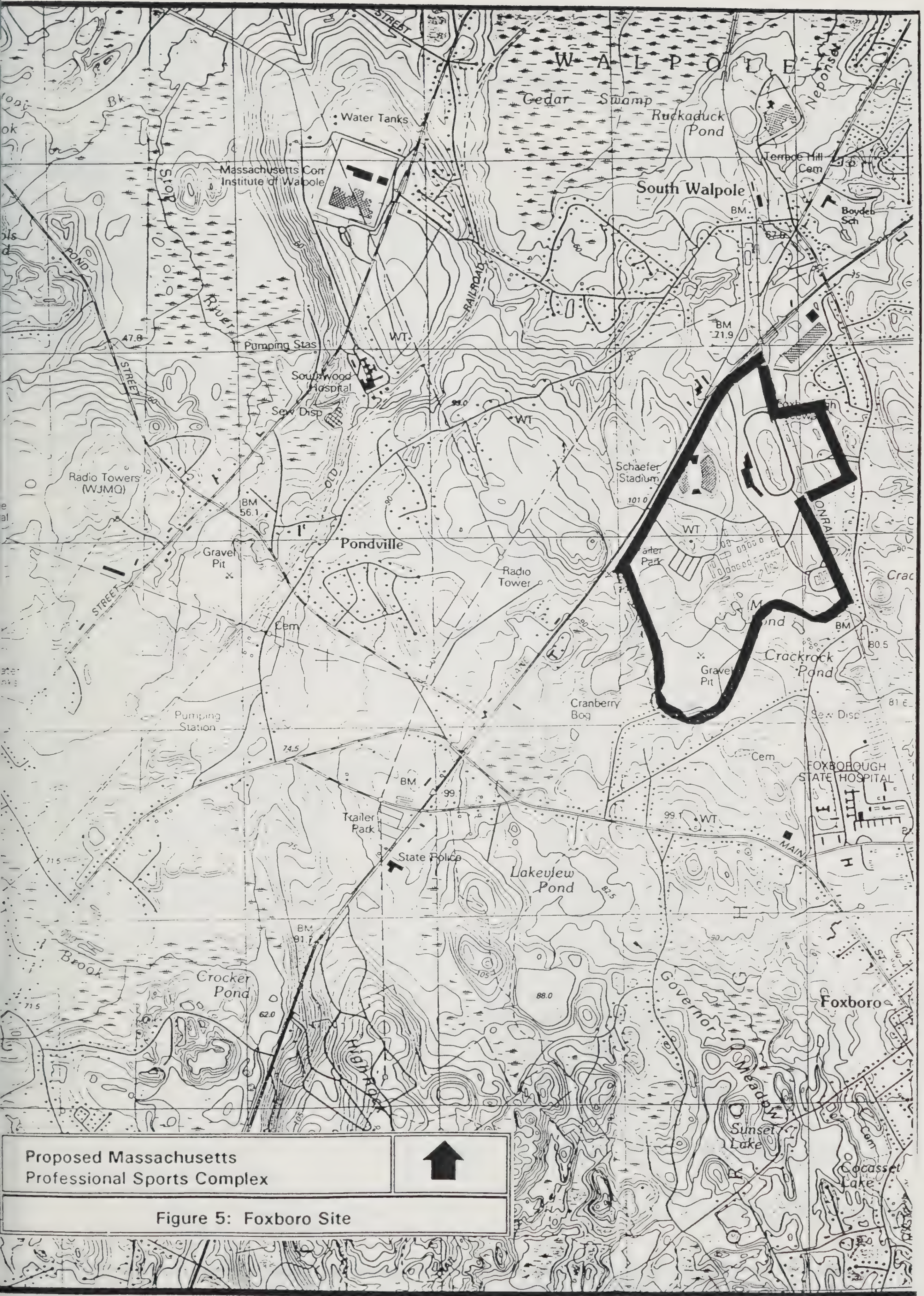

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Figure 5: Foxboro Site

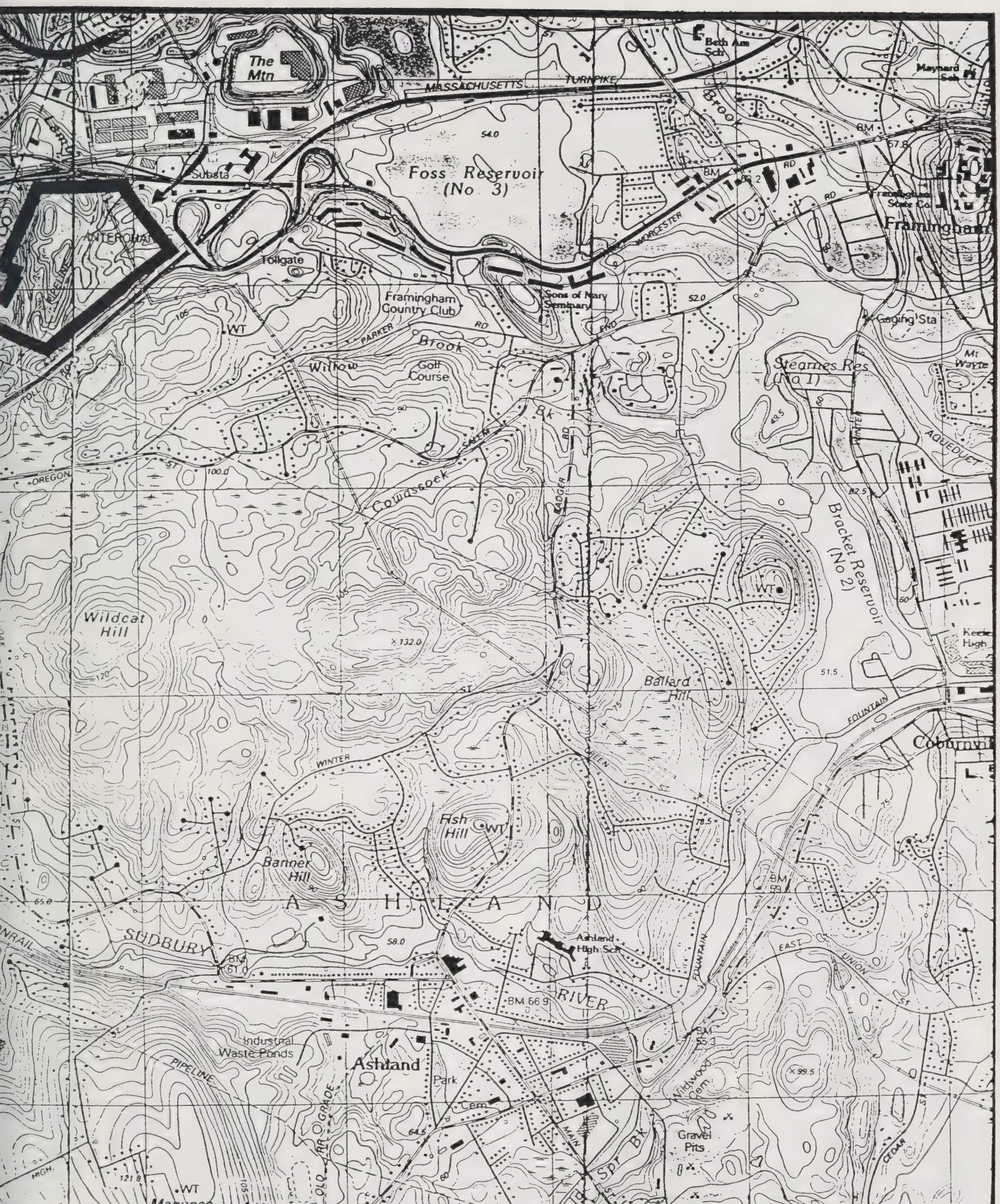

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Figure 6: Framingham Site

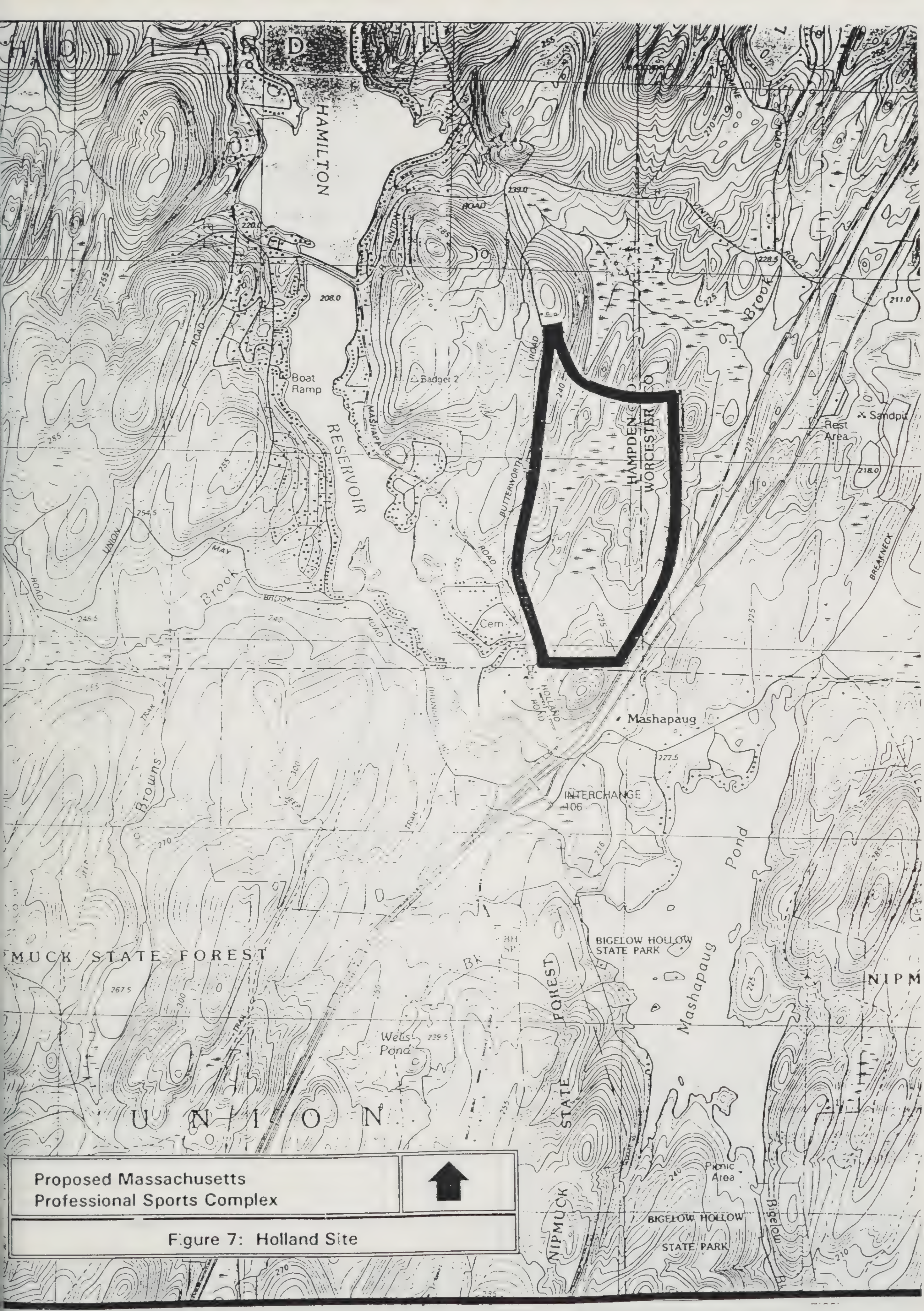

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Figure 7: Holland Site

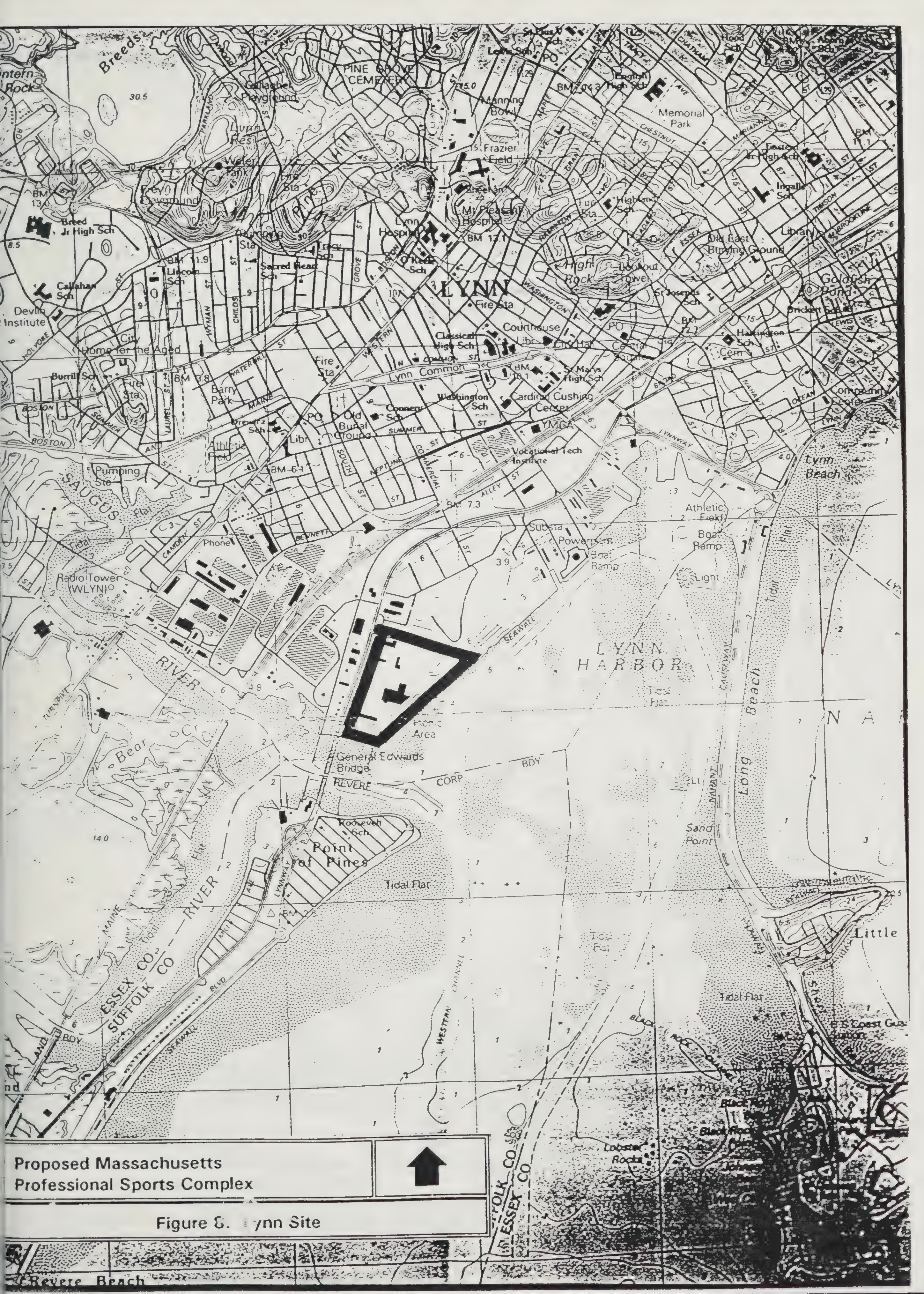

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Figure 8. Lynn Site

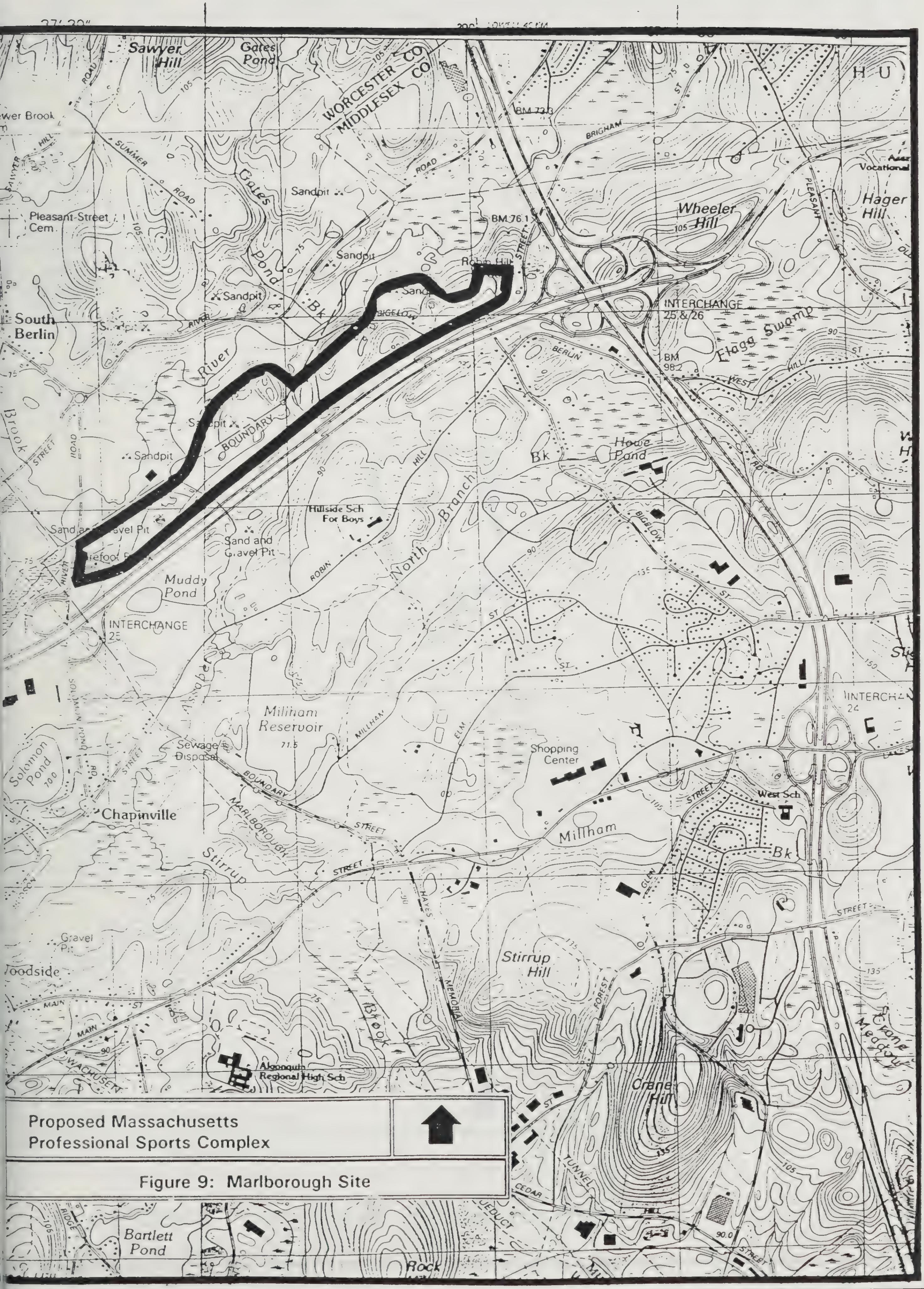

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Figure 9: Marlborough Site

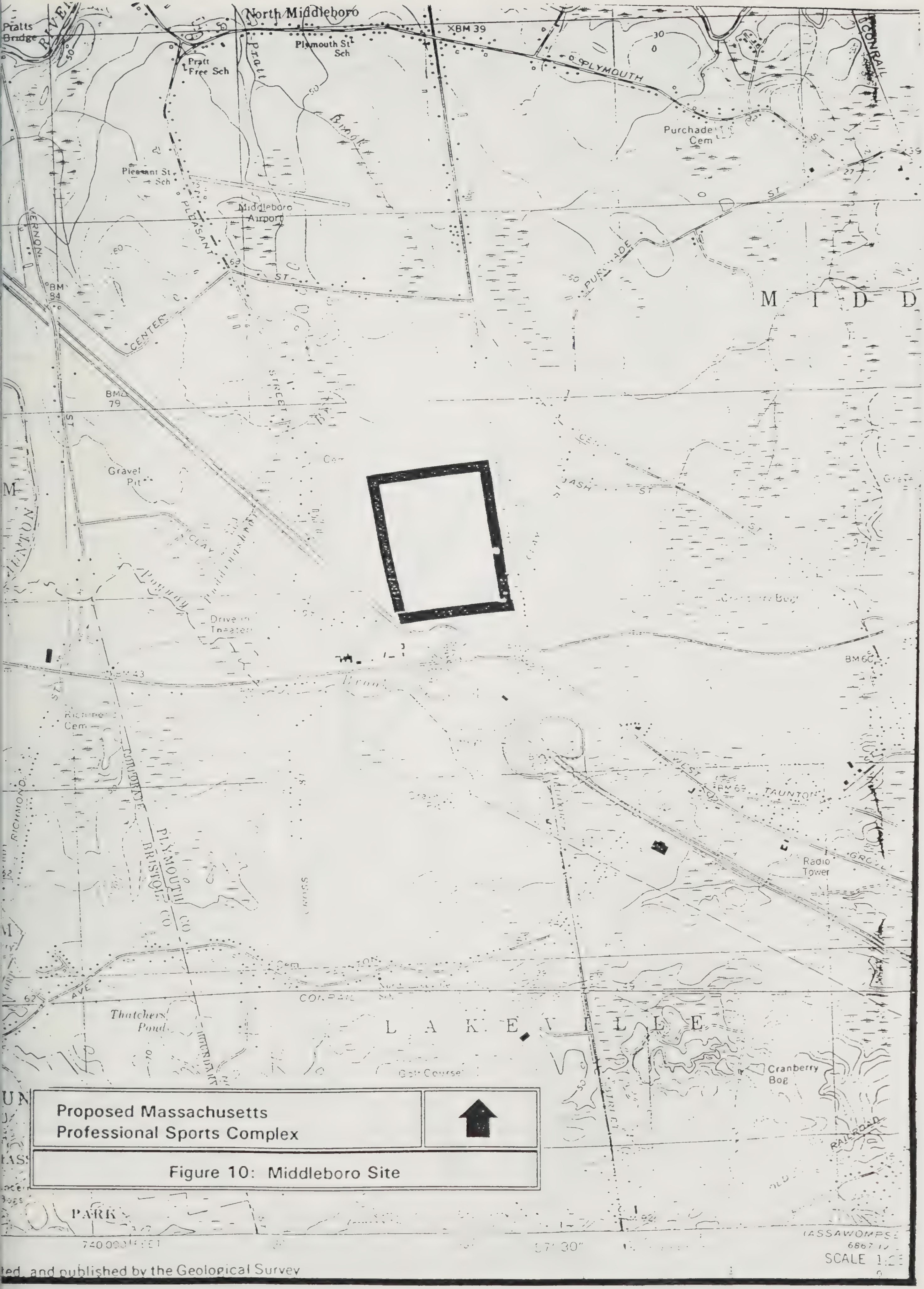

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Figure 10: Middleboro Site

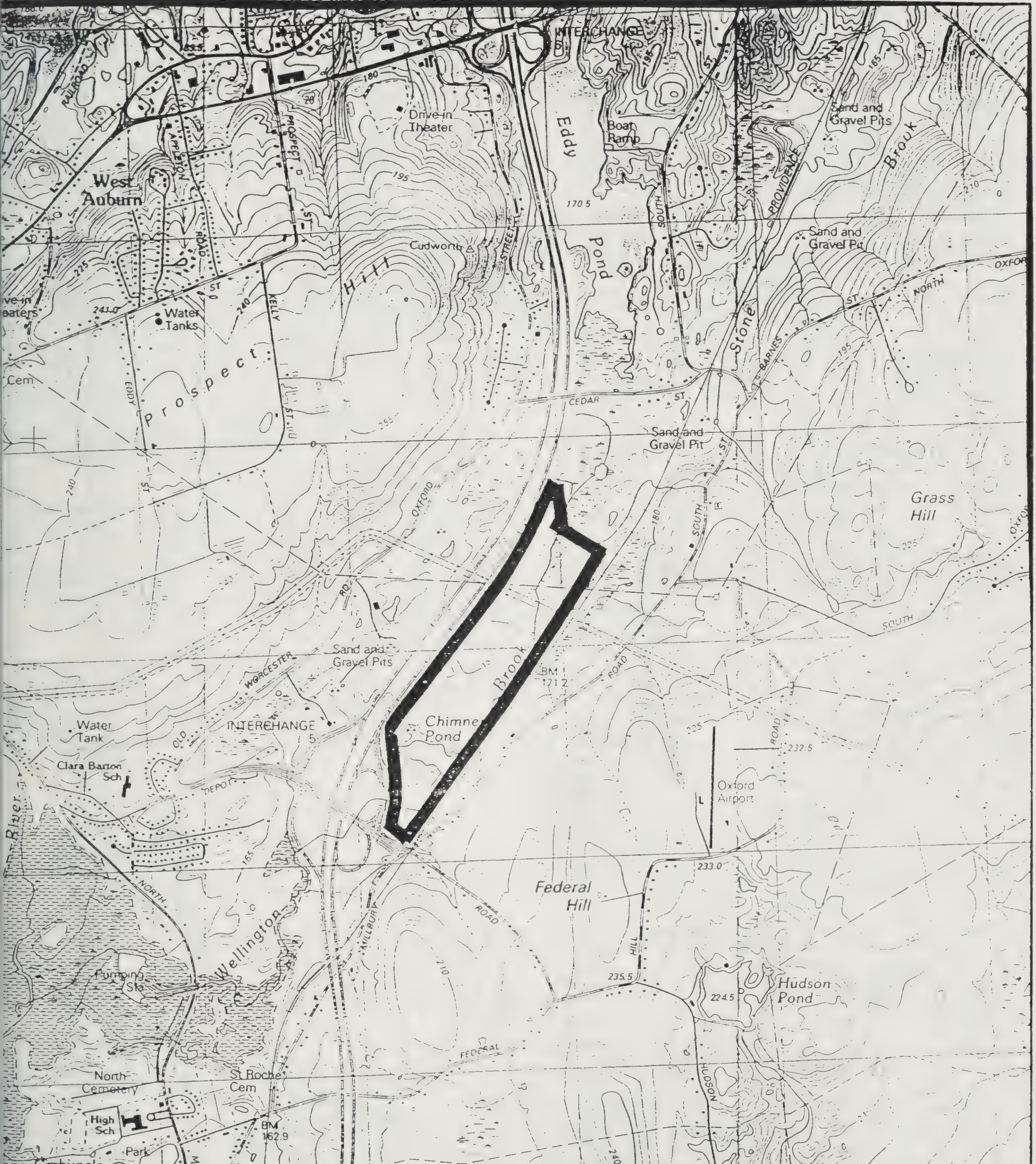

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Figure 11: Oxford/Auburn Site

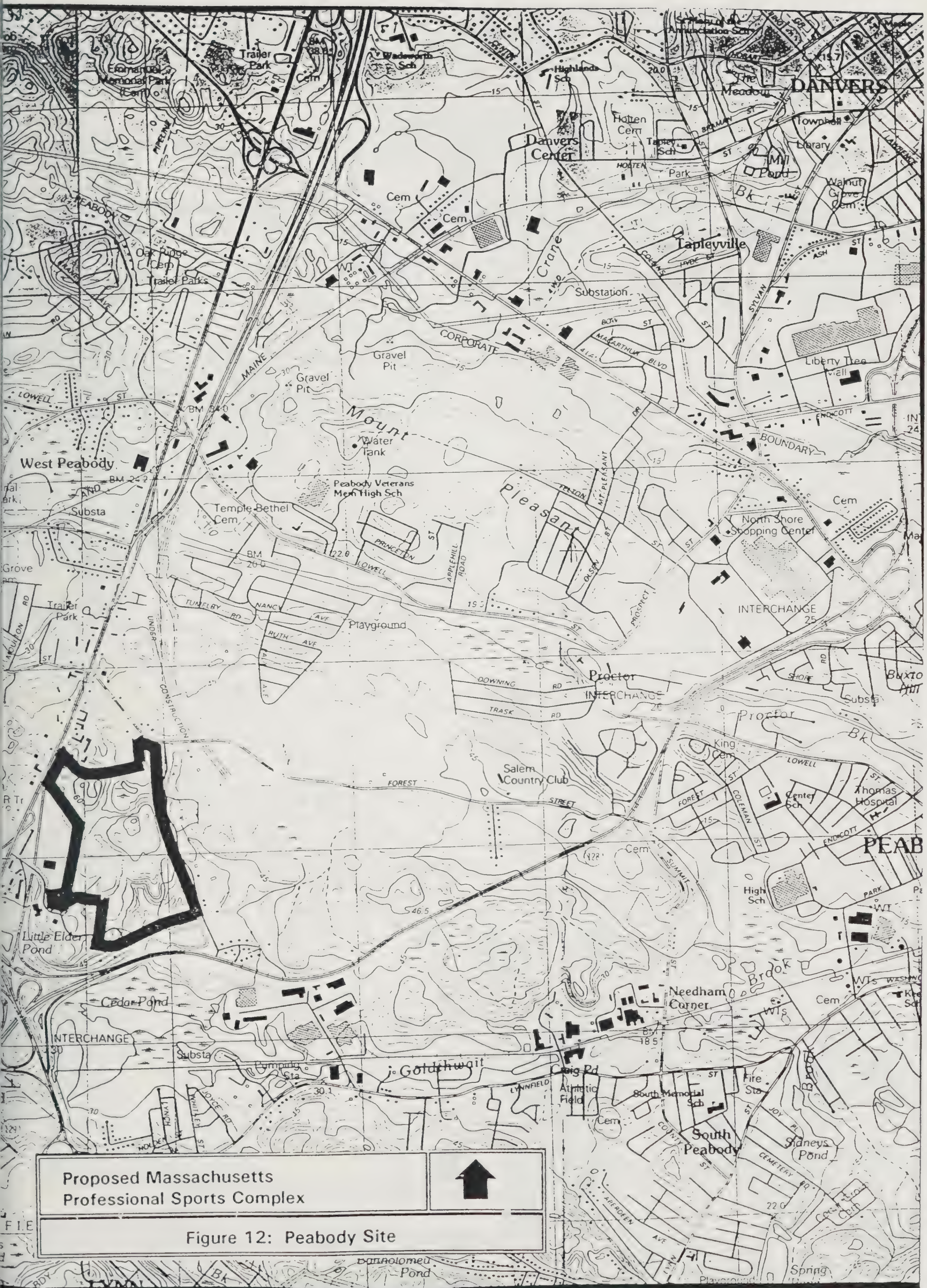

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Figure 12: Peabody Site

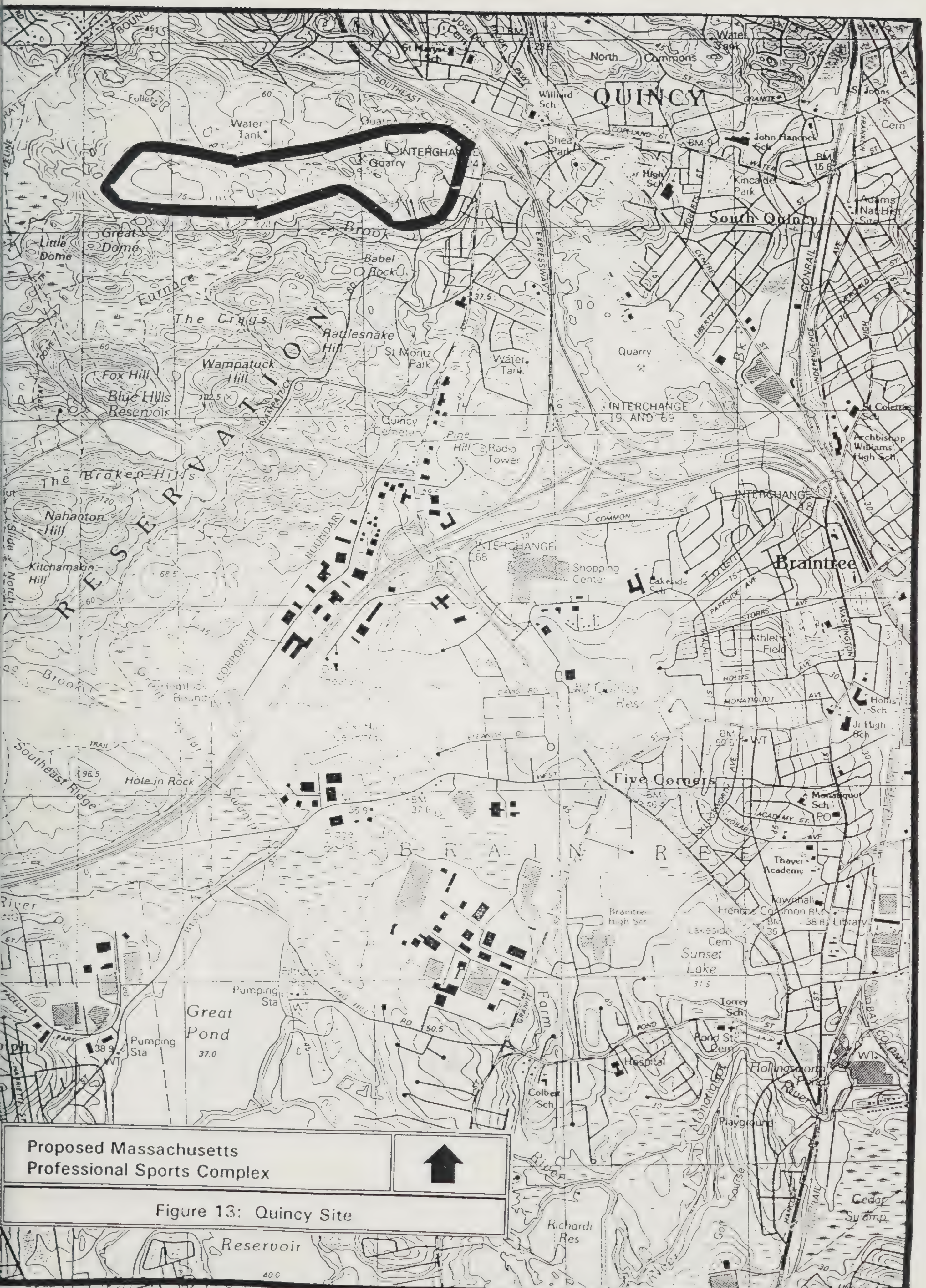

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Figure 13: Quincy Site

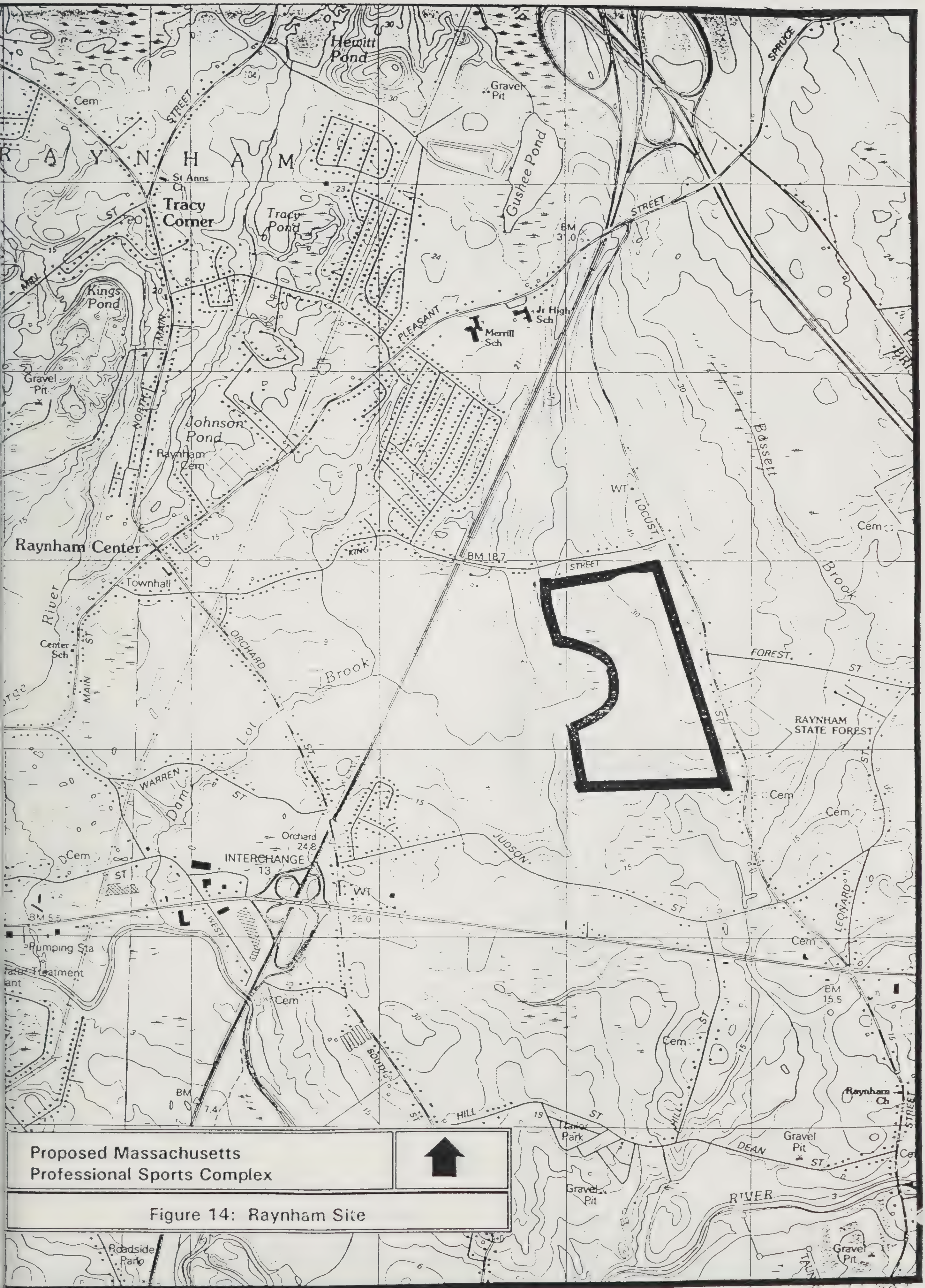

Figure 14: Raynham Site

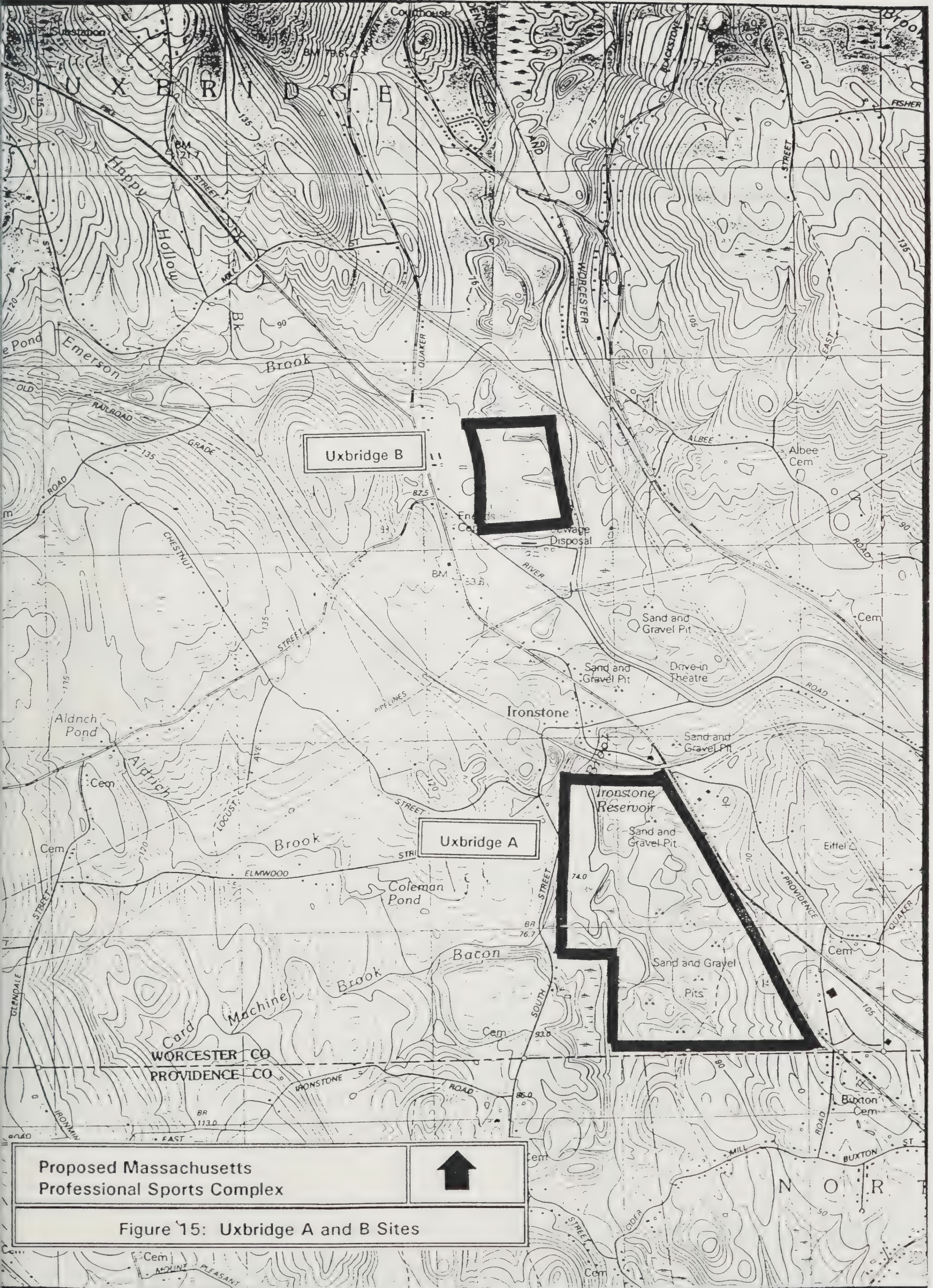

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Figure 15: Uxbridge A and B Sites

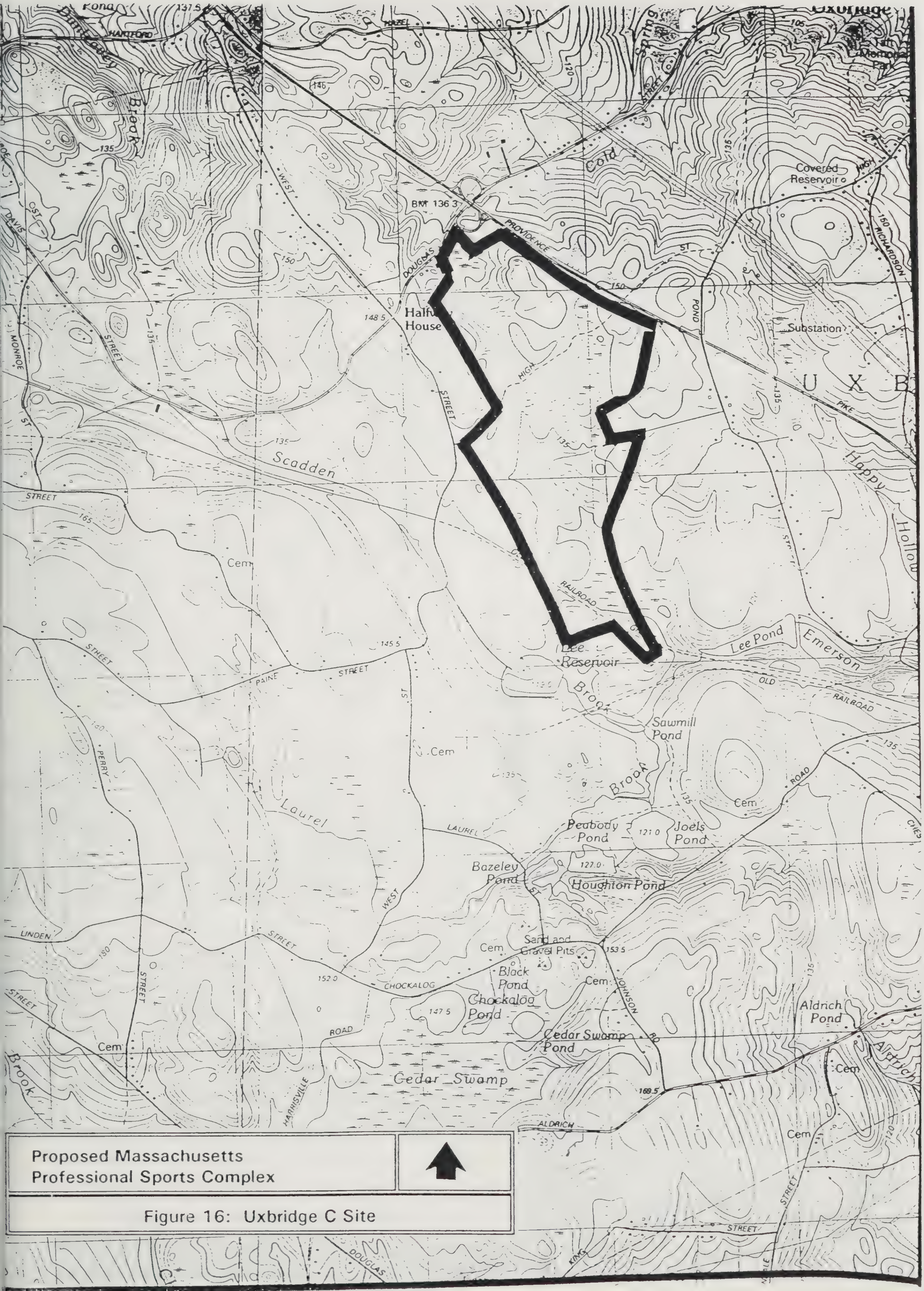

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Figure 16: Uxbridge C Site

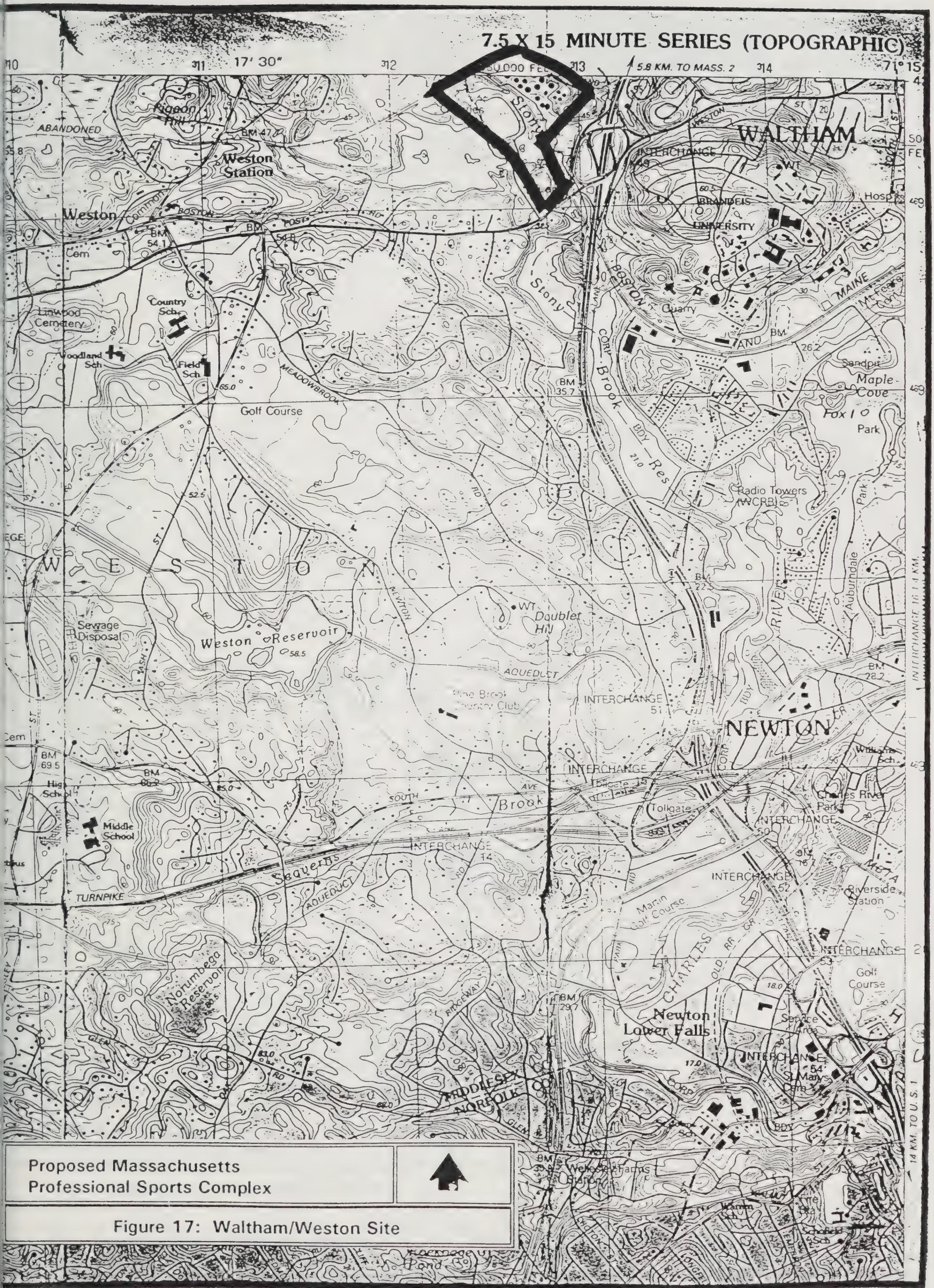

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Figure 17: Waltham/Weston Site

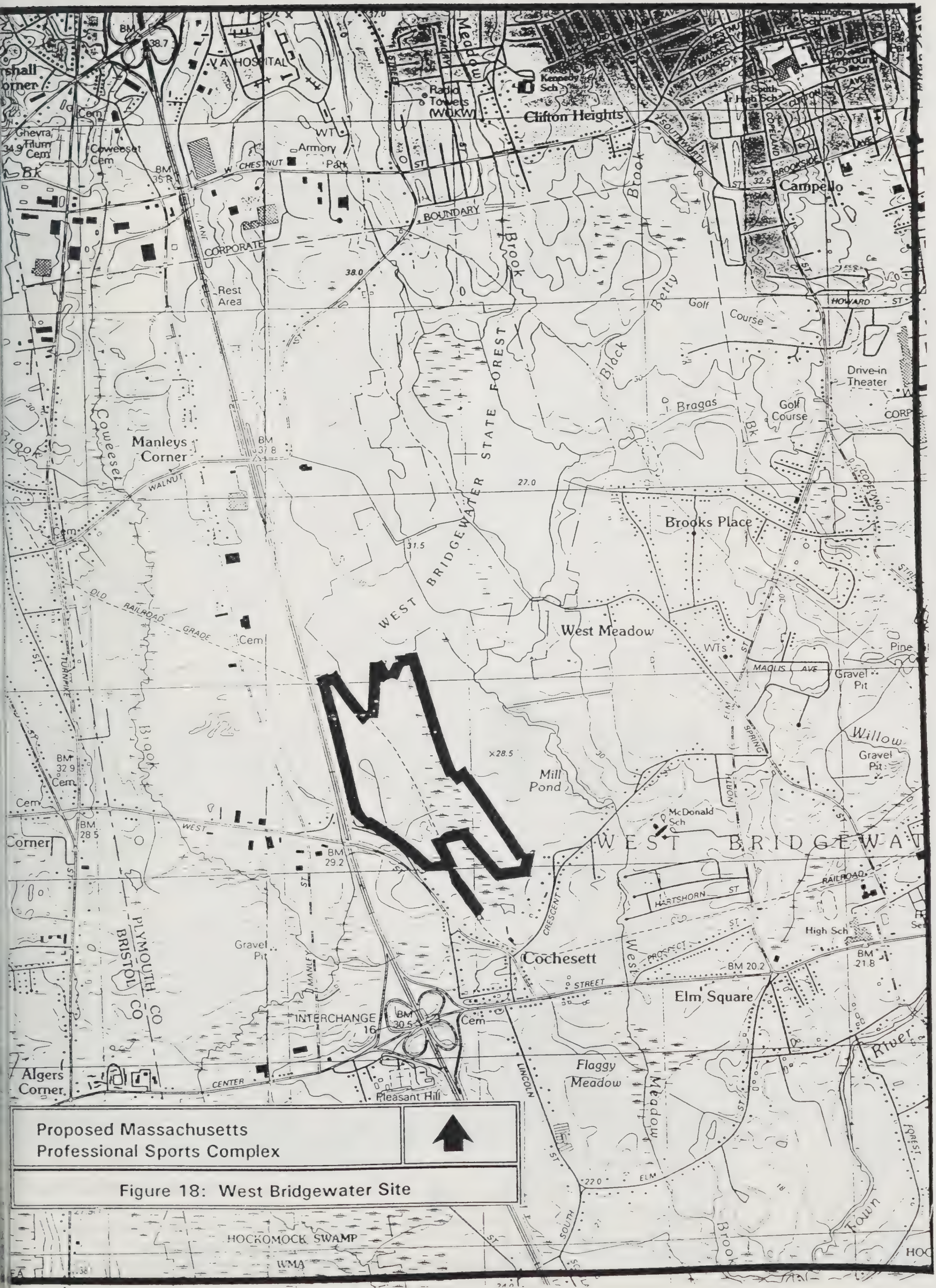

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Figure 18: West Bridgewater Site

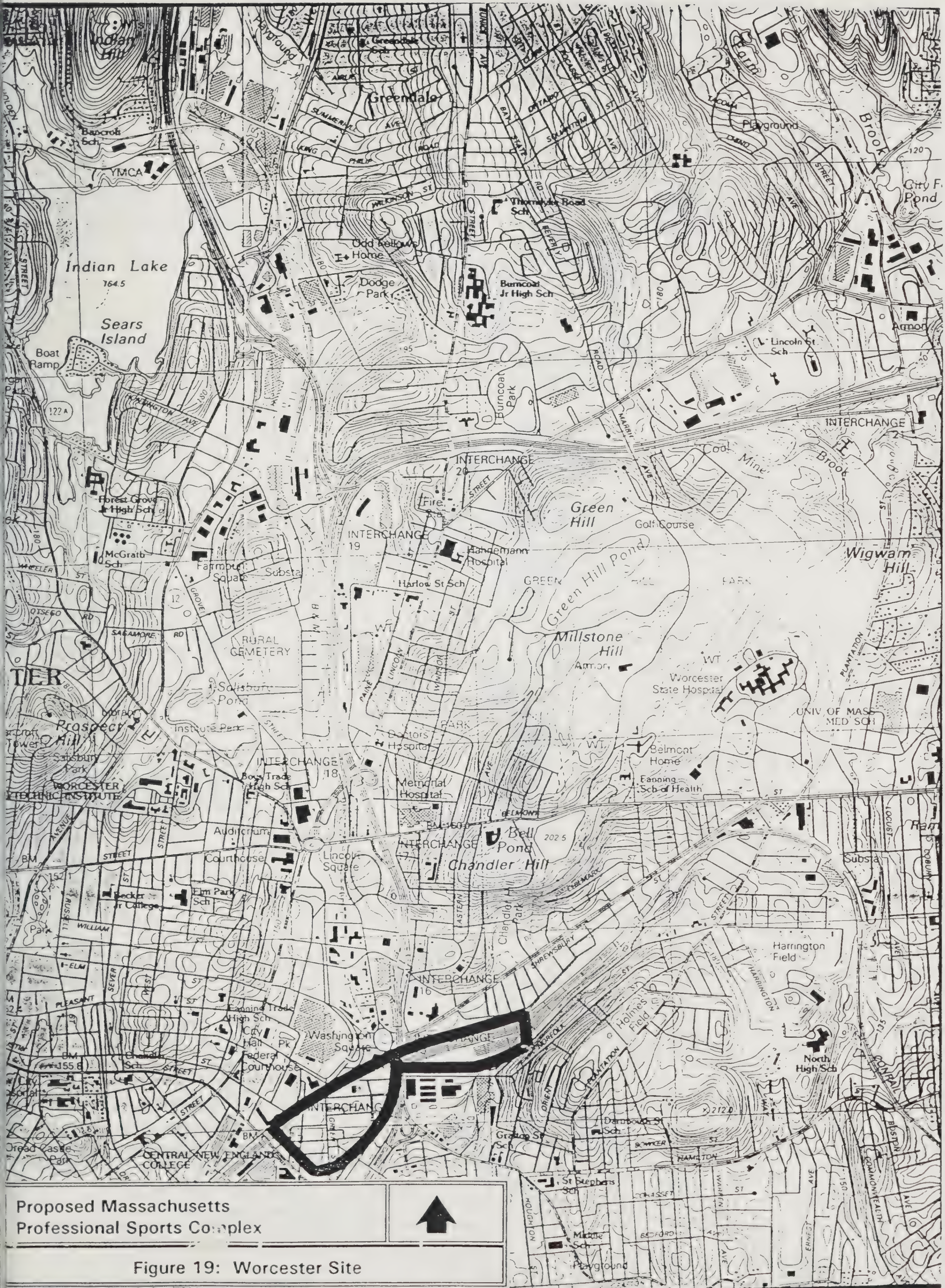

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Figure 19: Worcester Site

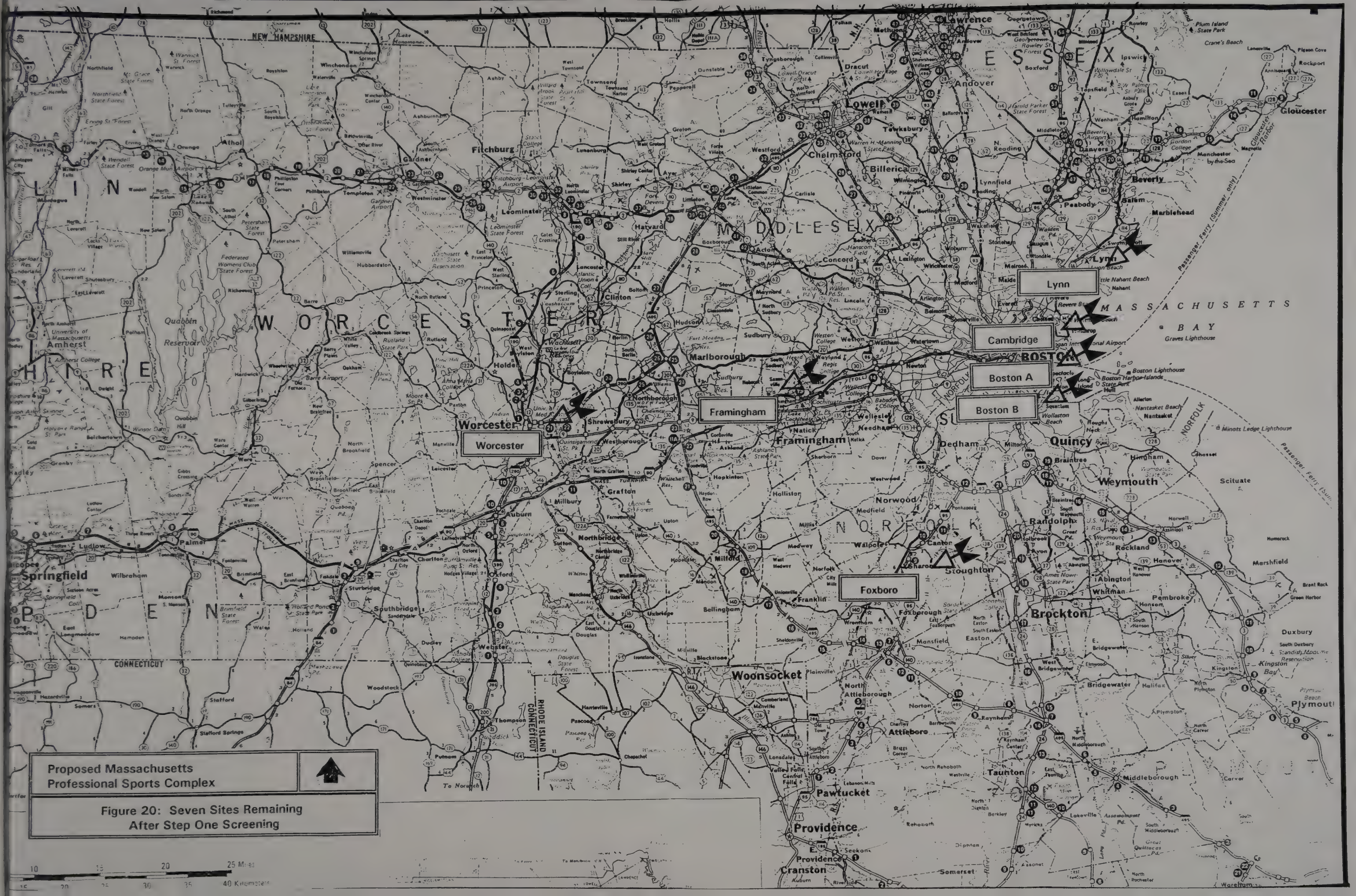

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Figure 20: Seven Sites Remaining
After Step One Screening

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